



Additional chart coverage may be found in CATP2, Catalog of Nautical Charts.

SECTOR 8 — CHART INFORMATION

SECTOR 8

WEST AND NORTH COASTS OF ICELAND

Plan.—The descriptive sequence of this sector commences at Reykjanes, the SW extremity of Iceland. It trends N to Horn (North Cape) and then E to Langanes, the NE extremity of the island.

General Remarks

8.1 Iceland lies 150 miles E of Greenland, 400 miles NW of Scotland, and 600 miles W of Norway. Because of its location in the North Atlantic, Iceland is of extreme geographical and strategic importance.

The island of Iceland is a volcanic plateau. The interior is marked by numerous mountain ranges and its coasts are deeply indented by fjords and large bays.

The NW portion is almost severed from the main part of the island by large bays which indent the coast. The mountainous projections are cut by deep, narrow fjords. These fjords with dark walls of basalt rise almost perpendicular from the sea, reaching heights of 610 to 762m.

The W coast of the island affords some of the best harbors in Iceland. Reykjavik, the capital, is situated in a large bight N of Reykjanes.

The entire coast of the island is fronted by an extensive shelf on which large fishing fleets assemble every year. This coastal shelf, as defined by the 200m curve, extends in some places from 40 to nearly 60 miles offshore. In some area the shelf-drop indents close to the shore.

These deeps are, from S to N, known as Jokuldjup, Kolluall, Vikurall, and Djupall.

Jokuldjup extends in a NE direction across the approach to Faxaflói to within about 13 miles of the N entrance point of the bay.

Kolluall, which roughly parallels Jokuldjup, extends to the S entrance point of Breidhafjörður, a large bay lying N of Faxaflói. During fog, its depths are a useful guide. The bank, which separates Jokuldjup from Kolluall, is known as Jokulgrunn.

Vikurall, a smaller deep, penetrates 20 miles into the bank between the latitudes of 65°45'N and 66°N.

Djupall, the N deep, is an isolated area within the limits of the bank. It extends in a SSE direction almost to the entrance of Isafjörður, the N of the large fjords on the W coast of the island. During fog, this deep is also a useful guide.

Refer to Pub. 180, Sailing Directions (Planning Guide) for the Arctic Ocean.

Winds—Weather

8.2 The winds are usually canalized within the deep fjords or are deflected along the coast. The cold air, which flows down the slopes of the island plateau, often develops into squalls which reach gale force near sea level. This activity is generally confined to the narrow coastal strip and the maximum force and frequency occurs at the entrances to the

ravines. However, when storms are raging at sea, the fjords provide welcome shelter, but the amount of protection depends on the wind direction and the local topography.

Within the fishing area, lying NW of Iceland, about 80 percent of gales blowing from NE or E, occasionally reaching hurricane force.

During the winter months, gales, from any direction, are very common over most of the region lying S of latitude 75°N. Some sections of this area are affected by prolonged gales, usually from the SW, which last for a week or more.

In the summer, gales are infrequent except over the area W of Iceland.

Ice.—The shores of Iceland are visited in certain years and at certain seasons, by drift ice which is carried down by winds and currents. The N coast of the island is seriously affected by this activity and the ice constitutes a hindrance to navigation in this area. As a rule, except in the most severe ice years, vessels can count on passing unhindered along the N coast after the end of May. The first ice is usually observed in the vicinity of Horn (North Cape). Recent studies have indicated that, after a protracted period of SW winds in the Denmark Strait, there is an increase in the amount of the East Greenland Current forced into the flow of East Iceland Arctic Current. Consequently, ice accumulates off the N coast of the island.

When large masses of ice are observed off Horn (North Cape), ice may be found along the W coast of the island. However, as a rule, the ice does not approach the Western Fjords (Vestfirðir). During very severe ice years with persistent N winds, ice has been observed within the entrances of some of these fjords.

Farther offshore, in the Denmark Strait, pack ice is usually present in varying amounts. During most of the year, it stays towards the Greenland side of the strait while the Icelandic side almost always remains clear inside the 180m line. It is only during unusual periods of persistent fresh or strong winds, from between W and N, that the ice is forced inside the 180m line. These rare occasions are most likely to occur in April or May when the ice is beginning to break up. The edge of the ice usually remains 40 to 60 miles off the W coast of Iceland until early June, when it recedes.

The ice, which drifts from the NW or W, is carried along the N coast of the island by the prevailing W current. At times, it seems as though the ice is approaching from NE, but ice from this direction never appears along the N coast before ice from the NW has reached Horn (North Cape). The ice, which is carried towards the coast as a result of protracted SW winds in the Denmark Strait, always remains for the longest period. Ice may also be forced against the N coast by NE winds but never in large packed masses.

When large masses of ice are carried unobstructed along the N coast and are met, at Melrakkasletta, by N storms, the ice is forced against the shore. However, it also continues to drift in an E direction until stopped by the peninsula of Langanes. If more ice is then forced from the W, it exerts a pressure on and

adds to the mass. Consequently, the pack spreads to the N and NE until it can no longer be confined by the Langanes peninsula. It is then carried S along the E coast by the polar current.

Fog.—Fog is an important weather element throughout this region. It is most frequent during the warmer season when navigation in these waters becomes feasible. July is the month of most frequent occurrence. The fog is reported to be most dense and widespread over the colder water lying close to the ice areas. The least foggy section of Iceland is reported to be that located near the NW coast.

Fog conditions around Iceland are most intense during seasons when the pack ice encroaches on the N coast, lowering neighboring water temperatures.

Advection fogs are the preponderant variety throughout this area. These occur when warmer, moist air moves over colder surfaces. Such fogs are frequently extremely dense when the lower layers of the air are stable, causing intensification of the fog very close to the surface. Visibility from the upper portions of the ship may be excellent during such conditions. Fogs most frequently occur with air temperatures between -2° and 5°C and are most closely associated with the colder open water along the edge of the pack ice, especially in summer. When navigating Arctic waters during the open season, vessels can frequently detect the proximity of the ice pack by the observation of distant fog. This phenomenon occurs most frequently in this region because the temperature of the sea surface is always very cold close to the pack ice and winds from any seaward quarter will quickly have their moisture condensed on contact with this colder surface.

Caution

Iceland has 20 volcanoes which have been active at one time or another since the island was inhabited. Reykjanes, the peninsula located in the SW part of the island, has frequently been disturbed by volcanic outbursts. In the sea surrounding this peninsula, islands have been alternately thrown up and submerged by submarine volcanic action.

Local magnetic anomalies have been experienced from time to time in the fjords and close off the coast of Iceland. Strong disturbances have been noted in areas offshore in which the depths were as great as 135m. Therefore, disturbed areas may exist in other places of similar and perhaps greater depths.

Abnormal magnetic variation of 5° to 19°E has been experienced over depths of 140 to 180m on the meridian of $26^{\circ}20'\text{W}$, between the latitudes of $64^{\circ}54'\text{N}$ and $65^{\circ}36'\text{N}$.

Details of magnetic anomalies, which have been observed in the area, are given in their respective places in this sector.

Attention is drawn to the danger of ice accumulation on vessels, which increases to the W and N of the island. In certain weather conditions, this accumulation on the hulls and superstructures can be a very serious danger. These conditions are most likely to be encountered in the Denmark Strait from December to April.

Numerous fishing vessels may be encountered in the vicinity of Iceland.

Reports of mirages and displays of Aurora Borealis are common in this area.

West Coast

8.3 Reykjanes ($63^{\circ}49'\text{N}$, $22^{\circ}42'\text{W}$), the SW extremity of Iceland, is a low, steep, rock strewn promontory. Skalfell, 76m high, and Syrfell, 93m high, are two prominent hills which stand 1 and 2.5 miles, respectively, NE of Reykjanes.

Thordharfell, 161m high, and Sulur, 144m high, are two hills which stand close together, 7.5 miles NE of Reykjanes, and form an excellent landmark.

Keilir ($63^{\circ}57'\text{N}$, $22^{\circ}11'\text{W}$), a conspicuous mountain standing 14 miles inland, rises to a height of 378m and can be seen from S over the intervening hills. Keilir is sometimes mistaken for other peaks, especially when approaching from S, and care must be taken to avoid any confusion.

A light is shown from a tower, 31m high, standing 1 mile N of the S extremity of Reykjanes. A radiobeacon is situated at the light tower. A light is also shown from a tower, 5m high, standing on the S part of Reykjanes. It is reported that, when approaching from SE by day, the light tower standing on the S part of the promontory may be seen before the higher light tower as it seems to blend in with the hills.

Fuglasker is a chain of islets, rocks, and shoal patches, which are separated by deep channels. It extends SW from Reykjanes for about 40 miles and can best be seen on the chart.

Eldeyjardbóði ($63^{\circ}29'\text{N}$, $23^{\circ}48'\text{W}$), the outermost of these dangers, is a small rocky patch, with a depth of less than 2m, which is always marked by breakers. A bank, with a least depth of 22m, lies about 11 miles SW of Eldeyjardbóði and breaks in heavy weather.

Geirfugladrangur, a rock awash, lies about 18 miles NE of Eldeyjardbóði and is separated from it by a deep channel. Nearby depths are reported to be changing continually due to undersea volcanic action, the area should be avoided.

Geirfuglasker, located about 2.5 miles NE of Geirfugladrangur, is a group of rocks with depths of less than 2m on which the sea always breaks; these breakers are especially heavy during W or NW seas or swells.

Eldey, located 8 miles SW of Reykjanes, is a sheer-sided rock, 77m high. It is one of the largest gannet colonies in the world and the ledges on the sides and the entire top of the rock are white with guano from these birds.

Eldeyjardrangur, a large rock 4m high, lies 1 mile SW of Eldey. A ridge of submerged rocks extend from this rock almost to Eldey.

Kletturinn, a rock with a depth 3.3m, lies 5 miles WSW of Reykjanes and is the nearest danger to the mainland. The passage lying between this rock and the mainland is the one generally used. The other passages, although deep, should be avoided because of heavy tide rips which are especially dangerous during spring tides.

8.4 Tides—Currents.—Between Reykjanes and Gardskagi, 16 miles N, the tidal currents, up to a distance of 3 miles offshore, are N going on the flood and S going on the ebb. The S going current is weaker than the N going one but, it is still stronger in these parts than on any other portion of the W coast. However, with strong gales from the S and SW, it may be decreased so as to run for only a couple of hours. The N going current, being the stronger, is liable, in case of poor visibility, to carry a vessel farther N than was intended. The

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tidal currents turn at about the time of high and low water on the shore or at about every sixth hour in fine weather.

Caution.—Vessels should not approach the coast between Reykjanes and Gardskagi too closely as there is always a heavy sea on the coastal shelf and, in bad weather, breakers may extend up to 1 mile offshore.

Karl, a high dark rock, is located 1 mile NNW of Reykjanes. It is separated from the coast by a narrow channel and, when seen from certain directions, resembles a church with a pointed tower.

Hafnarberg, a hill 40m high, stands on a promontory at the N end of a bay, 5 miles N of Reykjanes. Anchorage may be obtained, in a depth of 22m, sand, within the bay.

The coast N of Hafnarberg recedes to form a bight at the head of which is a foul inlet. A small settlement, with a prominent church, stands near the S entrance point of the inlet.

Anchorage is obtainable, in a depth of 24m, during winds from N to S through E, off the S side of the entrance to the inlet.

Stafnes (63°58'N., 22°45'W.) is located 10 miles N of Reykjanes. A light is shown from a tower, 11m high, standing on the point. Shoals and rocks extend up to 0.5 mile offshore in this vicinity. Five steel towers, 44m high, stand 1 mile NE of the point and an aeronautical radiobeacon is reported to be situated at this location. Four prominent dish antennas are reported to stand SE of the point. From seaward, the hangers and facilities of the airport, situated E of point, can be seen.

A local magnetic anomaly has been reported to exist between 2.5 and 5 miles W of Stafnes.

Hvalsnes, a settlement with a prominent church, is situated 1.25 miles N of Stafnes. Shoals and rocks extend up to 1 mile offshore in this vicinity.

8.5 Sandgerdi (Sandgerdhi) (64°02'N., 22°43'W.), a small trading and fishing harbor, is located 3 miles N of Hvalsnes. A reef, which dries, extends up to 1.25 miles offshore, close S of the harbor. It is marked by a lightbuoy at the seaward end and protects the harbor from the S and W.

A main light, which indicates the approach channel, is shown from a tower on a dwelling, 19m high, standing at the NE corner of the harbor. The fairway, 50m wide, through the entrance is then indicated by pairs of range light beacons. Caution must be exercised as shoals lie close on either side of the channel. Local knowledge is advised. It is reported (1992) that the entrance fairway and harbor have been dredged to a depth of 5.5m.

During offshore winds, anchorage may be obtained, in a depth of 20m, off the harbor.

Gardskagi (Gardhskagi) (64°05'N., 22°42'W.), located 2.5 miles N of Sandgerdi, is the S entrance point of Faxaflói, a large bay. The point is low and rocky and a reef extends 1 mile NW from it. A shoal patch with a depth of 13m, lies about 0.5 mile NW of the outer end of the reef.

A main light is shown from a tower, 27m high, standing at the extremity of the point. Another light is shown from a lower position on the same tower. A racon is situated at this light structure.

It has been reported that abnormal variation exists in a position about 4.5 miles NW of Gardskagi.

Faxaflói

8.6 Faxaflói (64°08'N., 22°40'W.), an extensive bay extending 25 miles E, is entered between Gardskagi and Malarrið, a point 48 miles NW. Its S shore is low with several hills rising inland. Its E and N shores are backed by high mountains near the coast and Snaefellsjökull, a conspicuous snow-covered mountain, stands N of the N entrance point.

The depths in the greater part of the bay are less than 91m and three banks, Vestra-Hraun, Syðrahraun, and Budhagrunn, lie in the bay.

Vestra-Hraun, a detached bank, lies between 6 and 16 miles N of Gardskagi. It has a least depth of 17m in the N part.

Syðrahraun is a bank which lies between 7 and 12 miles NE of Gardskagi. A least depth of 10m is charted in its NW part.

Budhagrunn, a detached bank of shingle and shells, lies about 30 miles N of Gardskagi. A least depth of 29m is charted in its S part.

Tides—Currents.—In Faxaflói, the tidal currents are regular. On the rising tide, the tidal current sets E along the S shore of the bay. Farther offshore, the trend is more to the NE, curving N and then NW. On the falling tide, these currents are reversed but the rate is considerably weaker. After N or NW gales, the ebb is strengthened and an onshore set may be experienced along the N and NE sides of the bay.

Caution.—During W gales, heavy seas are experienced on Vestra-Hraun and Syðrahraun. These are especially dangerous to trawlers and small vessels.

Vessels are advised not to proceed inside of the 20m curve without local knowledge.

Large fishing fleets assemble each year on the coastal flat, indicated by the 180m line, in the vicinity of the bay.

Caution is necessary in thick weather, when proceeding N from Reykjavík or when crossing the entrance to the bay, as vessels are liable to be set towards the dangerous rocks fringing the coast NE of Vester-Hraun.

8.7 Local Magnetic Anomaly.—The magnetic compass is not a reliable guide in Faxaflói, particularly in its S part. The following information is compiled from observations reported by various vessels, the results of which have been found to be in general agreement.

Refer to Pub. 180, Sailing Directions (Planning Guide) for the Arctic Ocean.

On the track between Gardskagi and Reykjavík, in an area 2 or 3 miles square centered in position 64°08'N., 22°24'W, a local magnetic anomaly of up to 11°E has been experienced. Within this area the compass needle was found to swing suddenly from 3°E to 8°E and then slowly until the maximum of 11°E was reached.

To the N of Reykjavík, an area exists in which the variation is W; a maximum deflection of 20° having been reported in the vicinity of the N extremity of Akrey Reef, about 1.5 miles NNW of Reykjavík.

Abnormal variation is also experienced in the inner approach to Hafnarfjörður; an anomaly of about 5.5° W occurs at a position 2 miles W of the outer breakwater, but, after quite a short distance, this anomaly changes to about 8°E. This latter

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anomaly then decreases regularly and ceases at a position about 1 mile from the breakwater. At a position between 365 and 550m farther inward, a W anomaly again occurs which gradually reaches a maximum of 5.5°.

The following data is based on limited observation:

In the N part of Vester-Hraun the compass needle was deflected 4°W.

Close N of the bank, which extends N from the island of Videy, the compass needle was deflected 8°E.

About 5 miles N of Grotta, the compass needle was deflected 8°E.

In an area about 4.5 miles WNW of Arkanes, between the latitudes of 64°19'N and 64°20'N and the meridians of 22°13'W and 22°21'W, the compass needle is reported to be deflected first one way and then the other. During one run, it was reported that a vessel, which was maintaining a good course by observations of the land, experienced the following deflections of the compass needle: first 4°E, then 3°W, next 13°E for a short time, and finally 4°W. A maximum W deflection of 10° has also been observed by a vessel.

Abnormal variation has been observed in Hvalfjörður and its approaches, but in the N part of Faxaflói, magnetic disturbances have only been observed in the vicinity of Snaefellsjökull.

8.8 Keilisnes is located 12 miles ESE of Gardskagi. The coast between these two points recedes to form a bight. The shores of this bight are indented by a number of small coves which afford anchorage for small craft. These coves are mostly used by small vessels during the fine weather season for the loading of locally cured fish. However, they are, for the most part, difficult to identify as there are very few landmarks in the vicinity.

From Keilisnes, the coast trends generally ENE for 7 miles to the S entrance point of Hafnarfjörður.

Utskaler church, standing 0.75 mile SE of Gardskagi light tower, is a high, conspicuous building surrounded by several large wooden houses. Gerdhar, a trading and fishing station, is situated 0.5 mile SE of the church.

Varaos, a landing place, is located close SE of Gerdhar. Anchorage is obtainable, in a depth of 27m, close NE of Varaos; however, caution is necessary to avoid the reefs which extend offshore in this vicinity.

A few scattered fishing villages lie S of Varaos.

Holmsberg (64°02'N., 22°33'W.), a steep, prominent cliff, stands 4 miles SE of Gardskagi. It is fronted by a reef and Stakkur, a steep sided rock 21m high, lies close offshore. A light is shown from a tower, 13m high, standing at the N end of the cliff.

Helquvik, a boat harbor protected by a breakwater, is located in a cove close S of Holmsberg.

Ilunypa, located 1 mile SE of Holmsberg, is a point which forms the N extremity of a small cove at the head of which lies Keflavik. A conspicuous church, with a spire, stands in the middle of the town. It is reported that mooring buoys, for use by fishing craft, are situated in the cove.

Vatnsnes, the S extremity of this cove, is formed by a rocky promontory. A light is shown from a tower, 8m high, standing on the N end of this promontory.

Keflavik (64°00'N., 22°33'W.) (World Port Index No. 00070) is a fishing center. The small harbor lies on the S side of the promontory. There are concrete and wooden piers with depths of 6 to 12m alongside. Vessels up to 5,500 dwt and 118m in length have been handled.

Pilotage.—Pilots can be contacted by call-sign: Keflavik Pilot on VHF channel 16; 12 or 14. Pilotage is compulsory for vessels over 100 ntr and is available day or night. Messages can also be sent through Reykjavik (TFA). The pilot boards 1 mile off Vatnsnes.

Anchorage.—Anchorage is obtainable, in a depth of 27m, clay and sand, good holding ground, in the middle of the outer part of the cove. Vessels should moor with two anchors. During winds from NNE to SE, this anchorage becomes dangerous.

Caution.—Lights in this vicinity are liable to become obscured, particularly during the autumn, by dust clouds which may hang over the land while it is clear at sea.

8.9 Njardvik (Njardhvik) (63°59'N., 22°32'W.), a small bay, is located 1.25 miles S of Keflavik.

Ytri-Njardhvik, in the NW part of the bay, is a small fishing harbor protected by breakwater. A number of stone jetties lie within the harbor and are used by small vessels. A lightbuoy marks a spit which extends seaward from the end of the breakwater. A directional light leads toward the S breakwater.

Anchorage.—Anchorage is obtainable, in a depth of 12m, fair holding ground, in the middle of the entrance to the bay; however, it is exposed to NE winds.

Keflavik Airfield is situated close W of Njardvik. An aeronautical light beacon is shown from the field. The tanks, buildings, and other facilities are conspicuous from seaward.

Vogavik, a shallow cove, is located 3.5 miles E of Njardvik. The shore between them is fronted by a long cliff, known as Vogastapi. The entrance to the cove is indicated by ranges. Anchorage is obtainable, in a depth of 29m, sand, under the lee of Vogastapi, but it is dangerous in N winds. Vogar, a small settlement with a shallow boat harbor, is situated at the NE side of Vogavik.

Gerdistangi (64°01'N., 22°21'W.) is located 2 miles NNE of Vogar. Rocks and shoals, extending up to 0.5 mile offshore, fringe the coast and the point. A light is shown from a tower, 10m high, standing on the point.

Keilisnes (64°02'N., 22°16'W.), a fairly conspicuous point, is located 2.5 miles ENE of Gerdistangi and is fronted by rocks and shoals. Kalfatjorn, a settlement, is situated about midway between these two points and a large church with a prominent tower stands on it.

Vatnsleysuvik, a rock-fringed bight, lies between Keilisnes and Hraunsnes, 3.5 miles ENE. Temporary anchorage, during S winds, can be obtained in the SW part of this bight; however, local knowledge is essential because of the presence of dangerous rocks.

Straumsvik (64°03'N., 22°03'W.), located 2.5 miles E of Hraunsnes, is a small harbor lying within a cove. Lambhagagrandi, a submerged reef, extends about 0.25 mile NW from the E entrance point. A mole, 365m long, extends W into the cove from close S of this reef. The entrance channel, 160m wide, is indicated by a lighted range and marked by buoys which may best be seen on the chart. A group of

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prominent silos stands at the root of this mole. The harbor is used by bulk vessels which serve the nearby aluminum works.

Depths—Limitations.—A quay, 225m long, is situated on the S side of the mole and has a depth of 12m alongside. Vessels up to 39,330 dwt and 118m in length have been handled.

It is reported that the harbor can accommodate vessels of up to 50,000 dwt; however, they are limited to lengths of 205m in winter and 215m in summer.

Pilotage.—Pilotage is compulsory. Pilots, supplied from Hafnarfjörður, board about 1.5 miles NW of the entrance. The harbor can be contacted by VHF.

Anchorage.—Large vessels can anchor, in a depth of 40m, good holding ground, about 5.5 miles NW of the entrance to the cove. For prominent mountains in the vicinity, see Reykjavík.

8.10 Hafnarfjörður (64°04'N., 21°57'W.) (World Port Index No. 00080), a small fjord, is entered between Straumsvík and Melshofdi, the low SW extremity of the Alftanes Peninsula, 2.5 miles N. The harbor, protected by breakwaters, lies at the head with the town rising behind it.

Port Limits.—The seaward boundary is drawn as follows: Line - 1: 020°, from 64°02.4'N, 22°08.0'W (Hraunsnes). Line - 2: 272°, from 64°04.7'N, 21°59.2'W (Balaklettur). These lines cross at position 64°04.9'N, 22°05.9'W.

The port can be contacted by telephone: Pilots & Harbormaster +354 9. 555 0492/555 3444; by VHF on channel 16; 12 or 14.

Pilotage.—Pilotage is compulsory for all foreign vessels and is available day and night. Vessels should establish contact on VHF as soon as possible and 3 to 2 hours before arrival to update ETA. Pilot boards 1 mile S of (Valhusagrunn red) Outer Buoy (64°05'N., 22°05'W.). Smaller vessels, and Masters with local knowledge may proceed to the (Helgusker green) Inner Lightbuoy (64°04'N., 22°01'W.) for pilot boarding.

Note:

1. Vessels unable to establish contact on VHF should try through Reykjavík Radio (TFA), telephone +354 9.1 51380 or 50376.

2. The port also provides pilotage for Straumsvík (64°03'N., 22°03'W.) Pilot boards 1 or 1.5 miles off the harbor entrance.

Anchorage.—Vessels waiting for a pilot may obtain anchorage about 1 mile SSE of the Outer Buoy (64°05'N., 22°05'W.). Smaller vessels may anchor 0.4 mile N of Hvaleyrarhofdi (64°03.9'N., 21°59.9'W.).

There are facilities for tanker, cargo, and fishing vessels.

Winds—Weather.—The fjord is exposed to W winds, which send in a fairly heavy sea, though its force is broken by the gradually shelving bottom. Winds from seaward generally blow with less force than those from off the land.

Ice.—Ice is never a hindrance to navigation and neither the fjord nor the anchorage freezes over.

Tides—Currents.—Tides rise about 4m at springs and 3m at neaps. Maximum tide rise is 4.5m. Spring tide averages to 3.9m and Neap 1.5m.

Aspect.—An outer approach lightbuoy is moored about 1.25 miles SW of Melshofdi. The entrance channel is indicated by a lighted range which may best be seen on the chart. A

prominent beacon, 4m high, stands on a hummock, 126m high, located about 1 mile SSE of the town.

Depths—Limitations.—The inner harbor is contained by 2 breakwaters: 1200m long in the N and 400m in the S. The entrance to the harbor is 150m wide, and 9m deep, with soft clay bottom.

North Quay, in the N part of the harbor, is 255m long with depths of 6 to 6.5m alongside along the N; mainly used by fishing vessels.

South Quay, in the E part of the harbor, is 430m long with depths of 6 to 8m alongside used by general cargo vessels.

Oseyrar Pier, in the S part of the harbor, is 130m long with depths of 6 to 6.5m alongside its N side and 2.5 to 4m alongside its S side; mainly used by fishing vessels.

A finger pier, 70m long, has depths of 5.5 to 6.6m alongside.

Tankers discharge alongside an oil berth at the inner side of the S breakwater. The berth has a depth of 8m alongside with soft clay bottom. A maximum arrival draft of 9.5m may be allowed.

Vessels approach the harbor entrance on heading 098° in line with two red lights. The port anchor is dropped near the entrance of the breakwater and the vessel is swung assisted by tug. As the stern enters the breakwater. The vessel is moored and brought along to berth, port side-to.

Tankers moor and start to lighter 2 or 3 hours before high water to lighten to 8m or less before low water. Tankers up to 27,350 dwt have entered the port.

Vessels are limited to a length of 190m and a draft of 8.5m, but allowing tankers to a draft of 9.5m.

Dangers.—Helgasker, a shoal patch, which dries, lies on the S side of the entrance channel, about 1 mile W of the Harbor entrance; it is marked by a lightbuoy. Vessels with a draft of 7m or greater are cautioned that shoals exist at 64°04.7'N, 22°08.8'W; which is 260° and 1.5 miles away from Valhusagrunn Buoy.

A coastal bank fronts the N shore of the fjord and foul ground and shoal patches extend up to 1.25 miles SSE of Melshofdi. Valhusagrunn, an isolated shoal patch with a depth of 4.6m, lies 1 mile WSW of Melshofdi, near the W end of the bank.

Caution.—In the outer approaches to the fjord, the alignment of the entrance channel lighted range leads over a depth of 8.6m, about 3 miles WSW of Melshofdi.

Due to isolated shoal patches in the outer approaches, vessels with drafts of over 7m should exercise caution.

8.11 Skerjafjörður (64°09'N., 22°01'W.) (World Port Index No. 00090) is separated from Hafnarfjörður by the Alftanes Peninsula which extends for 2 miles between Melshofdi and Eyri, its NE extremity. The town of Skerjafjörður, which forms a part of Reykjavík, is situated on the N side of the fjord.

Approaches.—A reef, with two extended shoals run seaward for 0.75 mile from the coast, located about 1 mile NNE of Melshofdi. Seltjarnarnes, 3.75 miles NNE of Melshofdi, is a peninsula which extends 1.75 miles NW and has two extremities at its seaward end.

Grotta, an islet, lies on a reef which extends from the N of these two extremities. A main light is shown from a tower, 23m high, standing on the islet.

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Sudhurnes, the S extremity, is located 1 mile SW of Grotta. A reef extends NE from Sudhurnes and nearly connects it to the islet. It is reported that a group of radio masts stand on the SE part of this extremity.

Numerous dangers lie in the approaches to Skerjafjörður and may best be seen on the chart.

Svidholtsbodhi, a shoal patch with a depth of 1.9m, lies about 1.5 miles NW of Melshofdi. Leirubodi, a shoal patch with a depth of 1.8m, lies about 0.75 mile NNW of Svidholtsbodhi. Jorundarbodi, a dangerous rock lying on a shallow patch, is located about 1.5 miles SW of Sudhurnes. Several shoal patches, with depths of 3.3 to 4.8m, lie up to 0.75 mile E and 0.5 mile NE of this rock.

Kerlingasker and Keppur are drying reefs which lie about 0.5 mile W and 0.75 mile SW, respectively, of Sudhurnes. The main entrance channel lies between these reefs and Sudhurnes.

Longusker, a narrow ridge of reefs, lies between 0.75 and 1.5 miles SE of Sudhurnes, on the E side of the entrance channel.

The entrance fairway is narrow and fringed with dangers. It is indicated by ranges and marked by buoys.

Depths—Limitations.—In the inner part of the fjord, a T-head pier, with a depth of 2.7m alongside its face, projects 338m from the NE shore. A submarine oil pipeline extends from the pier head and wires extend from its outer end N and NE to the shore. Vessels berth, at high water, heading SE. They use two anchors and secure to two stern mooring buoys. Vessels up to 6.6m draft can be handled.

Pilotage.—Pilotage is compulsory. Pilots can be contacted by VHF and come from Reykjavik. They will board in Reykjavik roadstead about 2 miles NNE of Grotta Light.

Caution.—During bad weather, vessels cannot enter Skerjafjörður and must either stand off or anchor in Reykjavik roadstead.

Submarine cables lie in the fjord and may best be seen on the chart.

Numerous small craft may be encountered within the fjord.

Reykjavik (64°09'N., 21°56'W.)

World Port Index No. 00100

8.12 Reykjavik is the capital of Iceland and a major port. City Harbor, the older section of the port, is situated close N of the city center. Sundahofn, the new section of the port, is situated 2 miles E of City Harbor and has container, bulk, and ro-ro facilities.

Tides—Currents.—Tides rise about 4m at springs and 3m at neaps.

Approaches.—**Akurey**, an islet 7m high, lies 1.5 miles ENE of Grotta. It is surrounded by reefs and lies on the tongue of a bank, with depths of less than 5m, which fronts the NE coast of the Seltjarnarnes Peninsula. Another tongue of this bank extends 1 mile NE from Grotta. The bay entered between Grotta and Akurey is foul and should be avoided.

Akureyjarfjörður is the name given to the part of the bank which extends about 0.4 mile N of Akurey. It is marked by a lightbuoy. An isolated shoal patch, with a depth of 12.7m, lies about 0.75 mile NNE of Akurey.

Orfirisey is located 1 mile SE of Akurey and several drying reefs and shoals lie between them. A former islet, Orfirisey is

now joined to the mainland and a breakwater extends 275m E from its E side.

Engøy, 15m high, is located 1 mile E of Akurey. A reef, which dries in places, extends about 550m S from the S extremity of this island and is marked by a lightbuoy. A main light, which indicates the approaches, is shown from a tower, 9m high, standing at the N end of the island. A racon is situated at the light tower.

Engøyjarfjörður, the W entrance channel, leads between Akurey and Engøy and towards City Harbor.

Videy is located 2.5 miles E of Akurey. Vidheyjarflak, a bank, extends about 1 mile N from the N coast of the island. Shoal depths of 6.8m and 2.2m lie about 0.75 mile NNW and 0.25 mile N, respectively, of the N end of the island. Several rocks and reefs front the W shore of the N part of Videy and are marked by a lightbuoy. Shallow water and a reef, marked by a lightbuoy, lie between the S end of the island and the mainland.

Vidheyjarsund, the E entrance channel, leads between Engøy and Videy and towards Sundahofn.

Laugarnes, a prominent point, is located on the mainland, 1.5 miles E of Orfirisey. A spit, with drying rocks, extends about 0.4 mile N from the N side of this point and is marked by a lightbuoy. Skarfaklettur, a rock 10m high fringed by a reef, lies 550m E of the point.

Aspect.—Vífilsfell, a conspicuous mountain 691m high, and Esja, a conspicuous plateau 851m high, stand 12 miles SE and 8 miles NE, respectively, of Reykjavik.

Sjómánnaskólinn Light is shown from the conspicuous steeple tower, 32m high, of the nautical school which stands 1.5 miles SE of Orfirisey. It indicates the entrance channels.

A conspicuous church tower stands 1 mile SSE of Orfirisey.

A conspicuous block of flats and an oil installation, with a prominent chimney close SE, stand on Laugarnes.

An aeronautical lightbeacon is shown from the top of a water tank standing on a hill about 0.75 mile SW of the nautical school. Vessels approaching from W have reported that this light is especially useful in poor visibility.

Vífilstadí Sanatorium stands about 4 miles S of Reykjavik and 11.25 miles NE of Keilir. It is reported to be very conspicuous from the outer W approaches.

Facilities at the airport, situated 1 mile S of City Harbor, stand prominent.

A tank farm is situated on the N side of Orfirisey.

A prominent silo stands on the N side of Vatnagardar basin.

A prominent reservoir is situated on the summit of a hill, 49m high, standing close S of the nautical school.

An outer approach lightbuoy, No. 7, is moored about 1.5 miles NW of Engøy Island Light.

The entrance fairway in Vidheyjarsund is indicated by a lighted range which may best be seen on the chart.

Caution.—Several dangerous wrecks lie within the entrance channels and may best be seen on the chart.

Submarine oil and gas pipelines, and submarine cables lie within the port and may best be seen on the chart.

Several marine farms are reported to have been established along the coasts of the islands lying in the approaches.

Local Magnetic Anomaly.—A W magnetic anomaly occurs at a position close N of the NE extremity of Akureyjarfjörður. It reaches a maximum of nearly 20°W. However, this anomaly is not experienced suddenly but increases regularly as the area is



REYKJAVIK VIEWED FROM NORTHWARD

approached from N or W and then decreases regularly as the entrance to City Harbor is neared. A magnetic anomaly of about 8°E has also been experienced at about 2.5 miles N of this position.

8.13 The City Harbor, protected by breakwaters, is situated on the S side of Orfirisey. The entrance is 100m wide and has a depth of 7m. The harbor is used by ferries, cruise, coastal, and fishing vessels. There is 2,900m of total quayage within the harbor with depths of 5.5 to 6.5m alongside.

Sundahofn is located SE of Laugarnes. Vatnagarðar, an open basin, has 780m of total quayage with facilities for grain, container, and ro-ro vessels. The main quay is Kleppsbakki, at the S side of the basin, which is 315m long with a depth of 8.2m alongside.

A harbor area, known as Kleppsvík, lies S of the open basin. A channel, 50m wide, dredged to a depth of 7m leads to this area. The main quays are Holtabakki Quay, which is 250m long with depths of 7 to 8m alongside, and Vogabakki Quay, which is 300m long with a depth of 8m alongside. A boat harbor lies S of Vogabakki Quay.

Grafarvogur, a small quay with a depth of 4.5m alongside, is located SE of the boat harbor and a narrow channel, dredged to a depth of 4m, leads to it.

Lighted ranges indicate the channels leading to the berths S of the open basin.

Vessels up to 50,000 dwt, 240m in length, and 8m draft have been accommodated within the port.

Depths—Limitations.—Two offshore tanker mooring berths lie within the port. They are serviced by submarine pipelines and situated close NE of Orfirisey and close N of Laugarnes. Tankers up to 32,000 dwt and 12m draft can be handled. The approach to the port is ice-free all year.

Pilotage.—Pilotage is compulsory for all vessels over 60m long and all vessels carrying hazardous or dangerous cargo. Pilots board near Lighted Buoy No. 7 or at the anchorage.

Port and pilot can be contacted by telephone: +354 9.1552 8211; fax: +354 9.1552 8990; telex: 2019 BURIS.

Contact pilot station and pilot vessel on VHF channel 16; 12 or 14; Port on channel 12 or 16; Berthing on channel 17; Tugs on channel 16; 12 or 14.

1. Vessels should send ETA 24 hours and 3 hours in advance through Reykjavik (TFA) to the harbor authorities and inform harbor master of any changes to ETA. The harbor office must be contacted 3 hours before arrival on VHF channel 12 or 17.

2. Small craft owners are advised to contact the harbor control on VHF channel 12 before berthing. Pilot boards near U buoy No 7. Pilotage is compulsory for Hvalfjörður Terminal, Helgúvík.

Anchorage.—The best anchorage for large vessels is in the roadstead lying E of City Harbor. There are depths of 11 to 12m, sand and shingle over hard, solidified mud; however, the holding ground is poor and the roadstead is exposed to N and E winds which are frequently strong. More sheltered anchorage can be obtained, in depths of 9 to 14m, under the lee of Engey but, heavy gales from W raise a considerable swell at this anchorage.

8.14 Kjalarnes (64°14'N., 21°55'W.), the W extremity of the peninsula which forms the S entrance point of Hvalfjörður, is located 3.5 miles NNW of the N extremity of Videy. Kollafjörður, the bight formed between these two points, extends SE and is indented by a number of fjords.

Eidsvík lies between the E side of Videy and Geldinganes, a peninsula extending from the mainland, 0.5 mile E. This fjord is clear of dangers except for a shoal area, with depths of less than 5m, which extends up to 365m offshore from the E side of the N part of Videy. A jetty, which serves a fertilizer plant, is situated on the S shore of the fjord. A lighted range, which can best be seen on the chart, is shown from close E of this jetty and indicates the entrance channel. A lighted buoy is moored about 0.4 mile NE of the NE extremity of Videy. Vessels may obtain anchorage, in a depth of 14m, about 550m NNW of the head of the jetty.

Caution.—A dangerous wreck, with 15.2m over it, lies close WNW of the NW extremity of Perney.

Lundey (64°11'N., 21°50'W.), a low and grass-covered islet, is located 1 mile NE of the N end of Videy. It is fringed by a reef. Perney, a low and grass-covered island, is located 0.75 miles E of Lundey.

Leiruvogur, a small shallow fjord, extends 2 miles E between Perney and Geldinganes. The greater part of this fjord dries at low water. Anchorage can be obtained by large vessels, in depths of 9 to 13m, in the outer part of this fjord, S of Perney.

Alfsnes, a small and rounded promontory terminating in a steep slope, lies on the N side of Leiruvogur.

Brimnes (64°12'N., 21°50'W.) a rounded promontory, is located 1.25 miles N of Lundey. It extends SW from the SW slopes of the Esja plateau and terminates in a hill with a steep slope to seaward. Saltvík, a small bight, lies 0.75 mile E of Brimnes and is foul up to about 365m offshore. Within this bight, rocks extend up to 183m offshore, close E of two conspicuous waterfalls.

A narrow fjord extends 1.5 miles ENE from the E entrance point of Saltvík. An overhead power cable, with a vertical clearance of 8m, spans this fjord at a position about 2 miles E of Brimnes. A rock, which dries 3m, lies in the middle of the fjord in the vicinity of the cable. Anchorage may be obtained, in a depth of 9m, in the middle of the fjord, about 550m W of the cable.

Hofsvík, a bay, is entered between Brimnes and Kjalarnes, 2.5 miles NW. It is encumbered by shoals, rocks, and islets and should be avoided by vessels without local knowledge. Kjalarnes is fronted by numerous rocks and reefs. Shoal patches, with depths of 7m and 9m, lie up to 550m SW of the point.

Local Magnetic Anomaly.—A magnetic anomaly exists in a small area located about 1.5 miles SW of Kjalarnes. A sudden anomaly of from 14° to 18°W has been experienced here. The variation is reported to be normal to the N of the area and up to 0.5 mile S of the area. However, farther S, anomalies of both E and W variation have been experienced. A local magnetic anomaly has also been reported to exist at a position about 5 miles N of Kjalarnes.

Brautarholtsborg, 47m high, is a conspicuous crag standing about 1 mile NE of Kjalarnes; it resembles a ruined castle.

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8.15 Hvalfjordur (64°16'N., 22°00'W.) (World Port Index No. 00105) is entered between **Kjalarnes** and **Daegra**, a point 4 miles NNW. The fjord trends NE and E for 17 miles and is navigable for almost its entire length. It diminishes to a width of less than 1 mile at the narrows, about 12 miles above the entrance, then broadens at the head and forms several bays and inlets.

The Esja plateau, on the SE side of the fjord, and **Akrafjall**, a prominent mountain 643m high, standing 6.5 miles N of Kjalarnes, serve to identify the entrance of the fjord. **Thufufjall**, a conspicuous mountain 533m high, stands near the head of the fjord. A prominent building stands on the lower slopes, 1.75 miles SW of its summit.

Tides—Currents.—Tidal currents in the entrance attain a rate of about 0.75 knot at springs. They are generally weaker towards the head. Tides at Grundartangi rise about 3.9m at springs and 2.9m at neaps.

Caution.—Several submarine cables lie within the fjord and may best be seen on the chart.

The wind may blow very strongly out of the fjord and, with E winds, very heavy squalls may come down from the mountains.

Numerous streams pour down the mountains on the SE side of the fjord and at the head. When the snow melts in the spring, these streams become torrents and bring down large amounts of shale and sand into the fjord.

Galtarvikurhofoi, a small point on the N shore, is located 5.5 miles NE of Daegra. Innri Holmur, a village with a prominent church, stands near the shore, 1.75 miles E of Daegra. Kuludalsa, a conspicuous farmhouse, stands 2 miles SW of Galtarvikurhofoi.

On the N side of the entrance a coastal bank, with reefs and rocks, extends up to almost 1 mile offshore. **Heynesflogur**, a rock with a depth less than 1.8m, lies at the outer edge of this bank, about 1 mile SE of Daegra. Shoal patches and rocks extend up to 1.5 miles offshore, close W of Daegra.

Hvaleyrri (64°21'N., 21°44'W.), a low and rocky spit, projects about 0.5 mile into the fjord from the S shore, 8 miles NE of Kjalarnes. A light is shown from a tower standing on the N extremity of the spit and a prominent stack, 12m high, stands on the beach 0.5 mile SSW of it.

A coastal bank, with reefs and rocks, lies between Kjalarnes and Hvaleyrri and extends up to 1 mile offshore. **Hnausasker**, a dangerous rock, lies at the outer edge of the bank, 4 miles NNE of Kjalarnes, and is marked by a lightbuoy. **Andriosey**, an islet 5m high, lies on the bank 1.25 miles N of Kjalarnes; it is fringed by rocks and a reef. Isolated shoal patches lie up to about 1.5 miles NW of this islet and are marked by a lightbuoy.

Grundartangi (64°21'N., 21°47'W.) is located on the N shore of the fjord, 1.25 miles NE of Galtarvikurhofoi. An ore processing plant is served by an L-shaped pier, 120m long, with alongside depths of 7.1 to 12.3m. Depths of 24 to 44m lie in the fairway of the fjord leading to the pier. Pilotage is not compulsory but pilots are available from Reykjavik or Akranes. It is reported that vessels are limited to a draft of 7.5m at low water. Vessels up to 15,000 dwt and 161m in length have been accommodated at the pier.

Vessels can obtain anchorage, in depths of 16 to 19m, in a bay on the S side of the fjord, close E of Hvaleyrri.

Hofdi (64°22'N., 21°34'W.), a small peninsula, is located on the S side of the fjord, 4.5 miles ENE of Hvaleyrri. Hvammsey, an island 30m high, lies close E of Hofdi and is joined to it by a stony ridge which dries.

Hrafneyri, a low and stony point, is located 1 mile NNE of Hvammsey. The channel between them forms the narrows and the fairway is reduced to a width of only about 550m. A rock with a depth of 11m, lies on the S edge of the fairway in the narrows.

Saurbaer, a village with a prominent church, stands on the N shore of the fjord, 2.5 miles W of Hrafneyri. Brekka, a conspicuous farmhouse, stands 1 mile N of Hrafneyri.

Hvammsvik, a bay, is entered between the SE end of Hvammsey and Hvitanes, a rocky headland, 1.25 miles SE. The N part of this bay is encumbered by foul ground and rocks. Vessels can obtain anchorage, in depths of 15 to 17m, in the outer part of this bay.

8.16 Helguvik (64°24'N., 21°27'W.), a bay, is entered between Hrafneyri and the W extremity of Thyrlisnes, a narrow peninsula, 2 miles SE. Thraetusker, the outermost of several rocks, lies about 1.25 mile ESE of Hrafneyri and is marked by a lightbuoy. Geirsholmi, a conspicuous islet 13m high, is located at the SE side of the bay, 0.75 mile ESE of Thraetusker. A shoal patch with a depth of 4.3m, lies about 0.5 miles NE of this islet.

An oil installation (Midsandur) is situated on the N shore of the bay and a jetty, 305m long, extends S from it. The head of the jetty is of dolphin construction and has depths of 13.4 to 14m alongside. Vessels can anchor, in a depth of 15m, S of the jetty.

A tank farm is situated on the NE shore of the bay and served by a pier, 360m long. Tankers up to 30,000 tons berth off the pier head using both anchors and stern moorings. They are berthed, bow outwards, during daylight hours only.

Brynjudalsvogur, at the head of the fjord, is entered between Hvitanes and the SW end of Thyrlisnes. A drying stony bank fringes the S shore of the bay and a conspicuous waterfall is situated close within the coast.

Botnsvogur, a shallow arm of Brynjudalsvogur, extends 2 miles NE and an overhead power cable, with a vertical clearance of 10m, spans the entrance. Its head dries up to about 0.75 mile offshore. The N and S shores of the arm are formed by steep mountain slopes and the prominent summit of Mulafjall, 333m high, stands 0.75 mile S of the head.

Local Magnetic Anomaly.—Large magnetic disturbances have been observed within an area which extends E and W for 1 mile and across the whole breadth of the fjord SSE of Saurbaer. The greatest deflection observed was 30°.

In a position SE of Saurbaer, about 0.5 mile offshore, an anomaly of 24°E was observed; however, in a position about 0.25 mile ESE of this last position, an anomaly of 23°W was observed.

8.17 Akranes (64°19'N., 22°05'W.) is a small port and fishing center standing on a low and rocky spit. The harbor is located at the NW side of Krossvik, a bay, entered between Ytriholdmur, a point located 1 mile W of Daegra, and Sudurflos, the S extremity of the spit, 1.75 miles W. A tower stands on Sudurflos and a drying reef extends about 455m SSW from it.

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Akranes Light is shown from a prominent tower, 22m high, standing 550m within the S extremity of Sudurflos. An outer lightbuoy, No. 11, is moored about 1.25 miles SW of the light tower.

Numerous dangers front the entire stretch of coast between the entrance to Hvalfjörður Fjord and Akranes and may best be seen on the chart.

Holmur Ytri, an islet 5m high, is located about 185m offshore. It lies on a reef which extends SW for about 0.5 mile from Ytri Holmur Point. Thjotur, a rocky and dangerous reef fringed by shoal water, lies about 1 mile SSE of Akranes Light and fronts the approach to Krossvík.

The channel leading between Thjotur and the dangers fronting Ytri Holmur is indicated by a lighted range, bearing 345°. However, it is difficult and should not be used by vessels without local knowledge.

The bay should be entered by the channel which leads between Thjotur and Sudurflos. Its fairway is indicated by a lighted range, bearing 051°.

Tides—Currents.—Tides rise about 4m at springs and 3m at neaps.

Depths—Limitations.—There is a depth of 8.5m in the entrance. The main pier has 290m of total quayage with depths of 5.7 to 8.5m alongside. There are facilities for ferries and fishing vessels. Vessels of up to 8,800 dwt, 137m in length, and 7.9m draft have been accommodated in the harbor.

Pilotage.—Pilotage is compulsory for foreign vessels. Pilots can be contacted by VHF and board in the vicinity of the outer lightbuoy. Local knowledge is necessary for a safe approach.

Anchorage.—Vessels may anchor, in depths of 14 to 17m, in the inner approach, about 640m SSE of the outer breakwater. The holding ground is good and the anchorage is well sheltered from winds off the land, from W through N to ESE. However, gales from other directions quickly raise a heavy sea in the bay.

8.18 Lambhusasund, a small and shallow bay encumbered by rocks, is located between the drying reef, which extends SW from Sudurflos, and Vesturflos, a narrow spit, 0.5 mile W. Lighted ranges indicate the narrow entrance channel, but local knowledge is required. The bay is used as a boat harbor.

Between Akranes and a point on the shore, 6 miles NNE, the coast forms a bay, the shores of which are fronted with dangers extending, in places, up to 1 mile offshore. A shallow estuary, with a wide expanse of drying mud at the entrance, lies at the head of the bay.

Caution.—The area within 4 miles of the coast NE of Akranes is unsurveyed and should be avoided by vessels without local knowledge.

Mellaholmi, a low islet, lies on the foul coastal bank, 5 miles N of Akranes. Flesjur, a small islet 2m high, is located 1.75 miles NNW of Mellaholmi. It is surrounded by several rocks, awash, which form the outermost danger.

Alftanes (64°28'N., 22°10'W.) is located 10 miles N of Akranes. It is fronted by foul ground and dangers which lie up to about 1.25 miles offshore. Staumfjörður, a trading station and boat harbor, is located 2 miles NW of Alftanes; entry requires local knowledge.

8.19 Borgarfjörður is entered E of Alftanes and trends NE for 14 miles to where Hvita, a glacial river, discharges into its head.

Midhfjardharsker, an islet 8m high, lies on the SE side of the entrance to the fjord, 2.5 miles NE of Flesjur. It is fringed by a drying reef and numerous dangers lie on the coastal bank to the E. It is reported that small vessels can anchor in the fjord, 0.5 to 2 miles N of this islet.

An extensive coastal shelf, foul with numerous uncharted rocks and shoals, lies on the N side of the approach to the fjord. This area must be avoided by vessels without local knowledge.

Lamasker, a group of rocks and reefs, lies 3 miles WSW of Midhfjardharsker. Graenholmi, a conspicuous islet 9m high, is located 1 mile WSW of Lamasker and is fringed by a reef. Both of these dangers lie on the S edge of the foul area.

Within the entrance of the fjord, both shores are low, fringed by numerous rocks and shoals, and backed by marshy grassland. On the SE shore, the grassland gives way to the steep cliffs of Hafnarfjall, a prominent mountain, standing 4 miles within the entrance.

The fjord can only be used by small vessels due to the shallow depths. Numerous rocks and dangers lie on either side of the fairway and extensive sandbanks are located in the inner part.

Borgarnes (64°32'N., 21°56'W.) (World Port Index No. 00120), a settlement, is situated 6 miles NNE of Midhfjardharsker, near the extremity of a narrow peninsula which projects SSW from the NW side of the fjord. An island lies close off the extremity of the peninsula and is connected to it by a bridge. A quay, situated on the W side of the island, is 29m long and has a depth of 1.9m alongside. Vessels with drafts up to 3.5m and local knowledge can reach an anchorage area lying 365m S of the settlement. A submarine cable lies across the fjord in the vicinity of the settlement.

Ice.—The fjord never freezes except near the shore, but a considerable amount of drift ice from Hvita may be encountered in it. The ice is often of the black variety; therefore, small vessels should, proceed with caution in the winter season.

Tides—Currents.—Due to being the estuary of a large glacial river, the tidal currents in the fjord are, at times, considerable. They may attain rates of up to 6 knots in the narrow parts.

Caution.—Under certain circumstances, especially in February and August, the sea level may fall up to 0.6m below chart datum.

Local magnetic anomalies exist within the fjord.

Thormodhssker (64°26'N., 22°19'W.), a prominent islet 15m high, is located on the edge of the coastal bank, 3.75 miles W of Graenholmi. A main light is shown from a tower, 23m high, standing on the islet. A racon is situated at the light tower.

Urdharbodhi, a shoal with a depth of 5.8m, lies about 1.25 miles S of Thormodhssker and is the outermost danger in this vicinity.

Syðhra Skogarives (64°48'N., 22°36'W.), a projection in the NE corner of Faxaflói, is located 22 miles NNW of Thormodhssker. The stretch of coast between has many small indentations and is fronted by numerous dangers which extend, in places, up to about 5 miles offshore.

Caution.—In this part of Faxaflói, vessels without local knowledge should not proceed into depths of less than 35m.

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Akranes, located 13 miles NNW of Thormodhssker, is a narrow spit which extends 2.25 miles NW from the mainland. Dangers lie up to 4.25 miles seaward of this spit. A bay, which is unsurveyed, lies between the spit and Sydhra Skogarnes, about 8 miles NW.

A trading station stands on Sydhra Skogarnes. An anchorage, partly sheltered by rocks and shoals, lies off the station and can be used by small vessels with local knowledge. A channel, marked by beacons, leads to the anchorage and is reported to have a least depth of about 6.4m.

8.20 Geldinganes, a small projection on the N coast of Faxaflói, is located 10.5 miles W of Sydhra Skogarnes. Breidhasker, a rocky islet fringed by dangerous rocks, lies 2 miles SSE of the projection.

Kirkjuhöll, a settlement, is situated 2 miles W of Geldinganes. A light is shown from a tower, 6m high, standing at the settlement.

Budir, a small trading station, is situated 7 miles W of Kirkjuhöll, at the NW corner of a small bay. This station is rarely visited, but anchorage is obtainable, in depths of 13 to 15m, about 1 mile SSE of it. The approach to the roadstead leads between a number of rocks and reefs and local knowledge is required.

Maelifell, a hill 566m high, and Budhaklettur, a dome-shaped hill 89m high, stand 2 miles NNW and 1.25 miles SW, respectively, of Budir. Both of these hills are prominent from seaward.

Breidavík, a small bay, is located 4 miles W of Budir. A shoal depth of 8.8m lies in the E approach to this bay, about 1.5 miles offshore. Arnarstapi, a small settlement consisting of several farms, is situated on the W shore of the bay and is visible from seaward. A light is shown from a hut, 3m high, standing on a hill close S of the settlement. Stapafell, a prominent hill standing close W of the settlement, has two peaks and a beacon is reported to stand on the lower one. Anchorage may be obtained, in a depth of 20m, good holding ground, about 0.5 mile E of the settlement. It should only be used during the summer months and local knowledge is required.

Local Magnetic Anomaly.—Magnetic anomalies have been reported to exist in the approaches to Arnarstapi and the magnetic compass is not reliable in this area.

8.21 Hellnanes, located 8.25 miles WSW of Budir, is the W entrance point of Breidavík. A reef extends about 0.75 miles S from the point. Hellnagöltur, a rock, lies about 1 mile E of the point. It only covers at the highest spring tides and is always marked by breakers. Hellnar, a modern settlement, is situated close N of the point and prominent from seaward.

Malarrið (64°44'N., 23°48'W.), the S extremity of Snaefellsnes and the N entrance point of Faxaflói, is located 4.5 miles W of Hellnanes. The coast between is fronted by rocks. A main light is shown from a tower, 24m high, standing on this low point.

Londrangar, a remarkable group of rocks, lies close E of Malarrið. These rocks are high and steep and, on some bearings, resemble a church with a high tower.

Snaefellsnes is the W part of the great promontory which separates Faxaflói, on its S side, from Breidafjörður, on its N side.

Snaefellsjökull, a very conspicuous mountain, stands at the W end of Snaefellsnes, N of Malarrið. Its summit, which is always covered in snow, consists of two peaks; the W and highest peak attains a height of 1,446m. When the summit is clearly visible, it is an indication of fine weather; however, the formation of clouds around the summit indicates that changing weather, usually a gale, is expected and will last as long as the summit remains clouded.

West Coast (Continued)

8.22 The main features of this stretch of coast are Breidafjörður (Breidhafjörður) and Vestfirðir (NW Fjords), which are deeply indented by numerous fjords. Breidafjörður, a large bay lying N of Snaefellsnes, is much encumbered with dangers. In contrast, the rugged part of the coast N of Breidafjörður is deeply indented by numerous fjords which, being deep, well-sheltered, and easily accessible, contain some of the best harbors in the country. This coastal area is usually known by the comprehensive title of Vestfirðir (NW Fjords).

Winds—Weather.—Gales are moderately frequent, more so than on the SW coast, but fog is relatively infrequent. Ice is seldom a hindrance to navigation, and is not usually encountered S of 66°N.

Caution.—The coastal bank extends 40 to 60 miles offshore and is indented by a number of deeps. The fall at its edge is very steep. Large fishing fleets may be encountered on the bank, especially in depths of 55 to 75m.

Dritvík, a small cove, is located 3 miles NW of Malarrið. A reef, which breaks in heavy weather, extends about 0.5 mile SW from its W entrance point.

Holahólar, a conspicuous hummock 113m high, stands close to the shore, about 5 miles NW of Malarrið.

Beruvík, another small cove, is located 7 miles NNW of Malarrið. During E winds, vessels, with local knowledge, can obtain anchorage in a depth of 25m, good holding ground, within this cove.

Svortuloft is the name given to the stretch of coast lying between Beruvík and Ondverðarnes. A light is shown from a tower, 12m high, standing on this stretch, 1.25 miles S of Ondverðarnes.

Ondverðarnes (64°53'N., 24°03'W.), the NW extremity of Snaefellsnes, is located 12 miles NNW of Malarrið. The coast between is formed by steep cliffs and fringed by rocks. Its volcanic origin is indicated by many small volcanic cones, by its brown, red, and yellow color, and by its lack of vegetation. A light is shown from a tower, 7m high, standing on the point, but is obscured on some bearings.

8.23 Breidafjörður (Breidhafjörður) (65°14'N., 24°20'W.), a large bay, is entered between Ondverðarnes and Bjargtangar, 40 miles NNW. It indents the W coast for a distance of about 45 miles and the shores are backed by high and conspicuous mountains. The S and N shores of the outer part of the bay are indented by a number of small fjords. The E part of the bay is filled with innumerable islets and rocks and is, therefore, mostly unsuitable for navigation; however, two of the most important trading stations within the bay, Stykkishólmur and Flatey, are situated there. Vessels proceeding to these stations require local knowledge.

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Local Magnetic Anomalies.—Several anomalies have been experienced in the area between Ondverdarnes and Bjargtangar. In an area bound by the parallel of 65°03'N., and between the meridians of 24°W and 24°20'W, large deflections have been observed with anomalies up to 22° both E and W.

Tides—Currents.—Within Breidafjörður, the flood or N-going tidal current sets into the bay along the S shore. The ebb or S-going tidal current does the reverse.

Along the whole of the N shore, the S-going tidal current runs E; however, the N-going tidal current runs E to the E of Skorarbodur (65°24'N., 23°58'W.) and W to the W of it. At spring tides, the N-going current may attain a velocity of up to 4 knots in the vicinity of Latrabjarg.

In the W part of the bay, a portion of the S-going tidal current sets SE.

Caution.—There is reason to believe that depths within the bay and the branch fjords at the head are decreasing and the land rising. Therefore, in many places depths less than those charted may be found.

Patches of foul ground lie in an area located about 31 miles NW of Ondverdarnes and may best be seen on the chart.

8.24 Aspects.—On the S side of the bay, in addition to Snaefellsjökull, the following conspicuous hills and mountains may be observed.

Enni (64°54'N., 23°45'W.), a steep-sided mountain 417m high, stands on the coast N of Snaefellsjökull.

Bulandshofdi, a dark mountain 323m high, stands close to the shore, about 8 miles NE of Enni.

Stod, a coffin-shaped hill 266m high, stands 3 miles ENE of Bulandshofdi.

Kirkjufell, a conical hill 462m high, stands 3.5 miles E of Bulandshofdi.

Bjarnarhafnarfjall (64°59'N., 23°00'W.) is a mountain 573m high and Helgafell, an isolated hill 71m high, stands 8 miles ENE of it.

On the N side of the bay, the following hills and mountains may be observed.

Kikafell (65°31'N., 23°18'W.) is a mountain 610m high and Hagatafla, another mountain 603m high, stands 6.5 miles WSW of it.

Stalfjall, a mountain 701m high, stands 8.5 miles WSW of Hagatala and Latrabjarg, a coastal ridge, attains a height of 441m 15 miles WNW of it.

The following may be observed near the head of the bay:

Dimunnarklakkar (65°08'N., 22°36'W.) is a hill with twin summits which stands on an islet and rises to a height of 71m.

Klofningur (65°13'N., 22°27'W.), a mountain 494m high, and Tungumuli (65°11'N., 22°10'W.), a mountain 640m high, are both very conspicuous.

8.25 Hellissandur (Sandur) (64°55'N., 23°54'W.), a trading station, is situated 4.25 miles NE of Ondverdarnes, at the head of a cove. Brimnes, the W entrance point, is fringed with reefs and a number of submerged rocks lie in the SW part of the cove. There is a small boat harbor which dries. Range beacons indicate the entrance fairway, but are reported to be difficult to identify. Anchorage may be obtained in a depth of 20m, sand, off the cove. Local knowledge is required.

Anchorage, with good shelter from winds between SW to SE, may also be obtained, in depths of 22 to 27m, off the coast, about 2 miles SW of Brimnes. A conspicuous radio mast stands near the coast, 0.5 mile SW of Brimnes.

Rif (64°55'N., 23°50'W.), a low point, is located 2.5 miles ENE of Hellissandur. Several farms are situated on the point and Rifshovn, a small harbor protected by breakwaters, lies close S of it. Dangerous reefs, marked by a lightbeacon and buoys, front the harbor. An entrance channel, dredged to a depth of 3m, is indicated by lighted range beacons. A church, with a high tower, stands 1.5 miles SW of Rif.

From Rif to Snoppa, a point 3 miles ESE, the coast is fringed with dangerous reefs which extend up to almost 1 mile offshore.

8.26 Olafsvik (64°54'N., 23°43'W.), a trading station, is situated in the W corner of a wide bay which is entered between Snoppa and Vatnstangi, 3 miles ENE. At the W end of the station there is a small enclosed harbor which dries in its inner part. There are berths for small vessels with depths up to 5.8m alongside. A light is shown from a tower, 3m high, standing on the coast about 1 mile E of the station. Anchorage may be obtained, in a depth of 20m, at an outer roadstead off the harbor. Lighted range beacons indicate the channels leading to the harbor and the anchorage. However, reefs and shoals lie adjacent to the fairways and local knowledge is required.

Local Magnetic Anomaly.—An anomaly of up to of 8°E has been observed over a small area in the approaches to Olafsvik.

Krossnes (64°58'N., 23°22'W.), a point fringed by steep-to reefs, is located 8 miles NE of Olafsvik. The coast between is fronted by rocks and shoals. A light is shown from a tower, 9m high, standing on the point. Shoals and rocks, over which the sea breaks, lie up to 1.5 miles N of Krossnes and are marked by a lightbuoy.

8.27 Grundar Fjörður (65°00'N., 23°18'W.) is entered between Krossnes and Skarfatangi, 5 miles NE. The fjord extends SSE for 4 miles and affords anchorage, but local knowledge is required.

Skarfatangi is the N extremity of a peninsula which separates Grundar Fjörður from Kolgráfjörður, to the E. The coast in the vicinity of this point is fronted by a bank, with depths of less than 5m, which extends up to 1 mile offshore.

Numerous shoals and a group of rocks lie within a dangerous area which extends 6 miles NNW from Skarfatangi; large vessels should not attempt to cross this area.

Eyrarfell, a mountain 352m high, rises close S of Skarfatangi and is prominent.

Melrakkaey, a low islet, lies in the center of Grundar Fjörður, 1.5 miles NE of Krossnes. It is steep-to on its E side but a reef extends up to 0.25 mile from the W side.

The shores of the fjord are generally sparsely inhabited. However, a settlement, with two jetties suitable for small craft, is situated in the SE corner, 3.75 miles SSE of Krossnes. A bay, with depths of mostly less than 5.5m, lies in the SW corner of the fjord. Grafarnes, a salient point, is located on the E side of this bay. A small settlement and a group of oil tanks stand on

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the point and two breakwaters extend seaward from close E of it.

Anchorage.—Good anchorage may be obtained, in a depth of 15m, good holding ground, in the SE part and off the E side of the fjord. Local knowledge is required as reefs lie in the vicinity of the anchorages.

Caution.—During the summer, winds from seaward do not blow directly into the head of the fjord, but frequently raise a heavy swell. During S and SW winds, heavy squalls may come down from the mountains.

8.28 Kolgrafafjörður (65°00'N., 23°03'W.) is entered E of Grundar Fjörður between the peninsula, on the W side, and the coast under the NW slopes of Bjarnarhafnarfjall, 1.5 miles E. Akureyjar, an island 19m high, lies 0.5 mile off the E entrance point and reefs lie between them.

This fjord offers one of the best shelters in the whole of Breidafjörður, but it is little used because of the dangers in its approach. No directions can be given for entering Kolgrafafjörður and local knowledge is required.

Hoskuldsey (65°06'N., 23°01'W.), a low islet, is located 11.5 miles NE of Krossnes and 5.5 miles N of the entrance to the fjord. It is one of the outer dangers in the SE part of Breidafjörður. A light is shown from a tower, 10m high, standing on the summit.

Between Kolgrafafjörður and Stykkisholmur, 9 miles NE, the coast is fronted by numerous islets, shoals, rocks, and reefs and should be avoided by vessels without local knowledge.

Ellidaey (65°09'N., 22°48'W.), an island lying near the outer edge of these dangers, is located 6 miles ENE of Hoskuldsey. A light is shown from a tower, 8m high, standing on a hill in the E part of the island. A small harbor, with depths of 5 to 7m, is located at the S side of the island. It affords anchorage with good holding ground, but local knowledge is required.

8.29 Stykkisholmur (65°05'N., 22°43'W.) (World Port Index No. 00130), an important trading station, is situated 4.5 miles SSE of Ellidaey, on the N extremity of a much indented projection. The station is situated on the S side of a small natural harbor which is formed between the mainland shore and three islands lying close off it. Two entrance channels lead from W through the dangers fronting the coast to the harbor. One passes N of Vadstakksey, an island lying 2 miles S of Ellidaey, and the other passes to the S of it. They are indicated by lighted ranges and beacons. Local knowledge is advisable, but the N entrance channel is recommended for those vessels without it. Vessels may anchor, in depths up to 27m, sand, good holding ground, in the harbor. There is a wooden jetty, 30m long, with a depth of 5m alongside.

Local Magnetic Anomaly.—Local anomalies have been reported to exist at positions in both the entrance channels. An anomaly of 11°W was observed in the N channel and one of 6°E was observed in the S channel.

Caution.—Caution must be exercised in the shallowest parts of the approach channels due to frequent changes taking place on the sea bottom.

8.30 Alftafjörður (65°02'N., 22°38'W.), an unsurveyed fjord, the entrance of which is obstructed by islets and rocks, indents the coast in a S direction close E of Stykkisholmur.

Hvammfjörður (65°06'N., 22°20'W.) is the name usually applied to all the waters E of Stykkisholmur. However, properly speaking, the name belongs only to that part of the fjord that lies E of the chain of islets that encumbers its entrance, 3 miles E of **Hrappsey** (65°07'N., 22°36'W.). From its entrance, Hvammfjörður extends E and NE almost 25 miles. The chain of islets, which encumbers the entrance to this fjord, lies on an extensive shoal area. Most of the channels, which lead between these islets, dry except for Rost (65°07'N., 22°31'W.), the principal channel. Hvammfjörður can only be navigated by power vessels with drafts up to 5m. There are no safe anchorages and the fjord is characterized by baffling winds, strong tidal currents, eddies, and whirlpools.

Caution.—Vessels should not attempt to pass through Hvammfjörður without local knowledge.

Tidal currents in the channels attain rates of 6 to 8 knots at neaps and even greater rates at springs.

Due to changes of the sea bottom, vessels can only pass through the channels at high water.

8.31 The part of Breidafjörður which lies NE of a line joining Ellidaey and Kikafell is encumbered with an immense number of islets, rocks, and shoals. These dangers lie in groups with navigable channels leading between them.

Caution.—Due to changes of the sea bottom, sections of the channels may only be used at high water.

Only the main channels have been surveyed and these are so narrow and intricate that they may only be used with local knowledge.

Flatey (65°22'N., 22°55'W.), an island 15m high, is located 14 miles N of Ellidaey. It is the largest and central island of a group lying in the NE part of Breidafjörður. A trading station is situated on its NW side. Reefs and small islets extend along the S side of the island and about 0.5 mile off it.

Klofníngur, an islet fronted by reefs and shoals, lies about 0.5 mile W of the W end of Flatey. A light is shown from a tower, 9m high, standing on the islet. A racon is situated at the light tower.

The principal outer dangers lying between Ellidaey and Flatey are described below.

Gassasker, a small islet 9m high, is located 2.25 miles NNE of Ellidaey. Dangerous reefs lie close N of it.

Stagley (65°14'N., 22°51'W.), an islet 13m high, is located 5 miles N of Ellidaey. This islet is fringed by reefs and a beacon stands on it.

Bjarneyjar (65°16'N., 22°52'W.), a chain of islets and rocks 3.5 miles long, is centered about 6.5 miles SSE of Flatey.

Alasker (65°18'N., 22°56'W.), a drying reef with an islet on it, is located 4.25 miles S of Flatey.

Brekar, a rock, awash, lies about 4 miles NW of Stagley.

Lagibodi, a shoal with a least depth of 1.9m, lies about 1 mile ESE of Brekar.

Oddbjarnsker (65°21'N., 23°09'W.), a prominent islet 11m high, is located about 6.5 miles W of Flatey. It is surrounded by foul ground. Another islet, 11m high, is located 2.25 miles NE of Oddbjarnsker and is fronted by rocks on its NE and SW sides.

Kroksfjardharnes (65°27'N., 21°57'W.), a trading station, is situated at the head of Breidafjörður. The main channel leading to it is approached between Gassasker and Stagley.

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8.32 Hagi (65°30'N., 23°27'W.), a village, is situated on the N shore of Breidafjörður, 5.5 miles W of Kíkafell. An anchorage roadstead, known as Hagabot, fronts the shore near the village and can be reached by small vessels. Channels lead through the reefs to the roadstead from the SW and from Flatey, but local knowledge is required.

Skor (65°25'N., 23°57'W.), the SW end of a short ridge, is located 13 miles WSW of Hagi. It rises above a cliff to a height of 700m and is prominent from E or W. A light is shown from a structure, 5m high, standing on Skor.

A dangerous reef extends 2 miles SW from Skor and shoal patches lie up to 3 miles WSW of the light structure.

Caution.—The coast between Kíkafell and Skor is fronted by numerous islets, rocks, reefs, and foul areas. The areas N and W of Flatey have not been completely surveyed and breakers have been reported in several places.

At Skor, the N going tidal current always runs strongly towards the shore. Consequently, because of the outlying dangers, extreme caution should be exercised in this area, especially in thick weather.

Raudhasandsbugur, a large bay, lies between Skor and Bjartangar, 15.5 miles WNW. Raudisandur, two narrow sand spits, is located on the E side of the bay and almost encloses, Baejaros, a shallow area. Saurbaer, a small settlement, is situated at the N end of Baejaros. During N and E winds, good temporary anchorage may be obtained, in a depth of 10m, close off the E part of the bay. However, this area is reported to be seldom visited as a heavy swell is quickly raised.

Bjartangar (65°30'N., 24°32'W.) is the N entrance point Breidafjörðurof. A main light is shown from a dwelling, 6m high, standing on the point. The light is not visible from Breidafjörður when bearing less than 337°.

Caution.—With strong N winds and especially during the strength of the N-going tidal current, vessels should avoid approaching the vicinity of Bjartangar as a steep and tremendous sea is formed. The S-going tidal current, when running against a strong S gale, may also cause a heavy sea.

A dangerous race of great strength occurs off Bjartangar. This is caused not only by the N-going tidal current, but also by the mass of water which is at the same time being emptied out of Breidafjörður. In this case, the resultant current sets out from the coast and boats are reported to have been saved by keeping quite close-in.

The shore in the vicinity of the point is fringed with reefs which extend up to 0.5 mile seaward. It should be given a wide berth.

Local Magnetic Anomaly.—Magnetic anomalies have been reported to exist in areas centered 22 miles NW and 5 miles W of Bjartangar.

8.33 Between Bjartangar and Ritur, 60 miles NE, the peninsula, which forms the NW coast of Iceland, is deeply indented by numerous fjords which are usually known by the comprehensive title of Vestfirðir or the Western Fjords. This peninsula is almost cut off from the rest of the Iceland and is joined to it by a neck of land about 6 miles wide.

The shores of the fjords, which run for considerable distances SE between high and steep coasts, are heavily indented by smaller fjords. A series of low points, consisting of shingle and sand, extend transversely across the fjords from one side and are the remains of terminal moraines of the Ice

Age. Good harbors or anchorages lie behind these low points in almost all the fjords and are used extensively by the fishing fleets which operate off this coast.

These fjords are easily navigated by power vessels as few dangers exist and most of these are located close to shore.

Ice.—The fjords are practically free from polar ice, but they are not suitable for vessels to winter in. Ice, which forms on the surfaces of the fjords, often breaks adrift due to the influence of tides and swell.

Occasionally, in severe ice years and after persistent N winds, the polar ice will approach the fjords. Under such circumstances ice has been reported to fill the mouth of Sugandafjörður. It has also been observed at the entrance to Onundarfjörður and within Dyrafjörður.

Tides—Currents.—Off all the fjords on the NW coast of Iceland, the tidal current sets NE on the rising tide and SW on the falling tide. The flood sets in along the S side of the fjords and out along the N sides. The ebb runs in the reverse direction. How far into the fjords the tidal currents run in this manner differs, but it is often not more than 1 or 2 miles, for the surface stream inside the fjords is usually outgoing as a result of the discharge of fresh water from the rivers and streams. This naturally varies with the season of the year. The outgoing tidal currents are always strongest along the N sides of the fjords and frequently cause eddies on their S sides, especially off salient points.

Up to a distance of about 2 miles from the coast, the flood current continues to run until about 1.5 hours after high water by the shore. It usually runs longer than the ebb current which is weaker. The greater the distance from shore the longer the interval between high and low water and the corresponding turn of the tidal current. At a distance of about 20 miles offshore, the N-going tidal current may continue for about 3 hours longer than close inshore.

Caution.—An area of foul ground patches, lying about 15 miles offshore, runs NE between Bjartangar and Fjallaskagi and may best be seen on the chart.

8.34 Blakknes (65°38'N., 24°20'W.), a steep headland, is located 9.5 miles NNE of Bjartangar. The coast between consists of grass-covered valleys running down to the sea between steep but not very high hills. There are several small bays with beaches located at their heads. The beaches are formed of yellow sand and are prominent from seaward.

Latravik, an open bay, lies between Bjartangar and Bjarnarnupur, 2.5 miles NNE. Hvallatur, a small settlement, is situated in the NE corner of this bay. Anchorage can be obtained by small vessels with local knowledge, in a depth of 6m, sand, within the bay. Breidhavig, another open bay, lies N of Bjarnarnupur. Rocks fringe the shore.

Patreksfjörður (65°38'N., 24°08'W.) the S fjord of the Vestfirðir, is entered between Blakknes and Talkni, 6 miles E. The entrance has depths between 4.7 to 4.9m and the harbor has a depth of 6.4m at LW and 10m at HW. There is a quay.

Both of these entrance points are steep and from midway between them, the fjord trends SE for 12 miles. General depths in the approach are 22 to 37m, but, as is the case with several others of the Vestfirðir, the fjord contains a deep in which the depths increase to over 55m. Talkni is fringed by a submerged reef.

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A light is shown from a tower, 14m high, standing at Olafsviti, on the S side of the fjord, 4.5 miles ESE of Blakknes.

Tunga, a small cove, is located on the S side of the fjord, 1.75 miles SE of Olafsviti Light. In the approach the depths decrease regularly from 20m to 11m, sand, at the entrance. Anchorage, well sheltered from S and SW winds, may be obtained in the cove with local knowledge.

Vatneyri (Patrekshofn) (65°35'N., 23°59'W.) (World Port Index No. 00140) is situated on the NW side of the fjord, 3.5 miles SSE of Talkni. The settlement is closely backed by high mountains.

There is a small and well protected harbor. The entrance is 37m wide and indicated by a lighted range. There are depths of 2.5 to 5m alongside the quays and vessels up to 3,000 tons can be accommodated. A prominent radio mast and a building stand close E of the entrance. Pilotage is not compulsory, but local knowledge is advisable. Anchorage can be obtained, in depths of 14 to 16m, off the harbor.

Sandoddi is located 6 miles SE of Olafsviti Light. In this vicinity a sandbank extends up to 640m into the fjord from the SW shore. An airstrip and a conspicuous bridge, which crosses the mouth of a river, are situated near this point.

Caution.—Submarine cables lie across the fjord in the vicinity of Sandoddi.

Local knowledge is advisable as shoaling has been reported in a few places within the fjord.

A heavy breaking sea has been reported N and E of Blakknes with a light to moderate N wind against tide. This can be avoided by keeping close into the headland but caution is necessary to avoid uncharted rocks close inshore.

8.35 Talknafjordur is entered between Talkni and a point on the coast, 2.5 miles N. This fjord trends SE for 7 miles and its shores are steep. It is free from dangers, but only sparsely populated. There are two small settlements, a few isolated farms, and no roads.

A small cove, lying close S of a point, is located on the SW side of the fjord, 3.75 miles ESE of Talkni. A disused whaling station is situated in this cove.

Sveinseyri (65°37'N., 23°51'W.) (World Port Index No. 00150), a shoal spit, projects S from the N shore of the fjord, 5.5 miles within the entrance. Its seaward end is marked by a lightbuoy. The fairway between this spit and the S shore has depths of 9 to 14m, but is only about 183m wide. It is indicated by lighted range beacons.

Tunga, a settlement, is situated 0.75 mile E of the spit. There is a small wharf used by fishing and coastal vessels. Anchorage is obtainable, in depths of 20m, excellent holding ground, about 365m E of the spit.

Caution.—Local knowledge is advisable as depths may be less than charted.

Submarine cables lie across the fjord at its narrowest part.

8.36 Kopanes (65°48'N., 24°07'W.), a point fringed by rocks, is located 9 miles N of Talkni. A light is shown from a structure, 6m high, standing on the point.

Arnarfjordur (65°51'N., 24°00'W.) is entered between Kopanes and Slettanes, a point 7.5 miles NE. This fjord is considerably larger than Patreksfjordur and steep mountains rise to heights of 610 to 762m on both of its sides. At the head,

it is divided into two branches by, Langanes, a peninsula. Depths in the middle of the fjord are deep and range from 51 to 110m. Except off Kopanes and Langanes, the shores of the fjord are steep-to and free from dangers. A shoal sandspit extends about 1 mile NW from the W extremity of Langanes.

Bildudalur (65°41'N., 23°36'W.) (World Port Index No. 00160), a trading station, is situated on the NW shore of a small cove, 14 miles SE of Kopanes. There is a T-head pier which extends 60m from the shore. Its head has a berth 37m long with a depth of 4.9m alongside. Vessels up to 2,500 tons have been accommodated. An L-shaped jetty projects 60m from the shore close SW of the pier. It has a berth 46m long with a depth of 4.9m alongside. A breakwater extends 100m SE from the shore close SW of this jetty.

A light is shown from a tower, 5m high, standing on the W extremity of Langanes, 2.25 miles NE of the station.

Anchorage can be obtained, in a depth of 11m, close SE of the jetty.

Caution.—Submarine cables lie in the fjord close N of the anchorage.

Heavy squalls frequently come down from the mountains and N winds are reported to send in a considerable sea.

A local magnetic anomaly has been experienced close N of Kopanes.

8.37 Hafnarnes (65°55'N., 23°48'W.), the S entrance point of Dyrafjordur, is located 3 miles NE of Slettanes. The coast between is fringed with rocks.

Svalvogar Light is shown from a tower, 6m high, standing on the coast 1.25 miles SW of Hafnarnes.

Fjallaskagi, a low point, is located 5 miles N of Hafnarnes. A spit extends S from this point and, with onshore winds, vessels should not approach as the sea breaks up to 0.5 mile from it. A light is shown from a tower, 12m high, standing on the point.

Caution.—An area of foul ground patches, lying between about 20 and 40 miles offshore, runs NE from Fjallaskagi to Straumnes and may best be seen on the chart.

Dyrafjordur (65°57'N., 23°51'W.), which extends SE for 17 miles, is entered between Hafnarnes and Fjallaskagi. This fjord is considered to be the best for shipping, because it is wide, mostly clear of dangers. It is generally free from ice and is used extensively by trawlers operating off the coast. Excellent anchorages may be found in the many bays located along both sides of the fjord.

Aspect.—Skagafjall, a mountain range 700m high, rises behind Fjallaskagi on the NE side of the entrance.

Myrakollur, a peak 311m high, stands close to the N side of the fjord, about 8.5 miles SE of Fjallaskagi.

Sandarfell, on the S side of the fjord, rises to a height of 372m, 2.75 miles SE of Myrakollur.

Caution.—Strong E winds may lower the sea level in the fjord by up to 1.5m.

Submarine cables lie across the fjord SE of Thingeyri.

Heavy squalls come down from the mountains and blow out of the fjord. These squalls are generally stronger near the head.

Thingeyri (65°53'N., 23°29'W.) (World Port Index No. 00170), a trading station, is situated on the S side of the fjord, about 8 miles within the entrance. A fishing harbor is situated close S of a low and flat point.

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A light is shown from a tower, 4m high, standing on the point and a prominent church, with a spire, stands in the station.

A wooden pier, 110m long, projects from the shore near the trading station. It has a berth 30m long with a depth of 6.7m alongside. This pier was reported (1975) to be unusable.

An L-shaped pier projects from the shore close S of the wooden pier. The berthing face on its seaward side is 56m long with a depth of 5.5m alongside. On the inner side of this pier, there are two berths, each 33m long, with depths of 1.8 to 4m alongside.

Excellent anchorage may be obtained E of the harbor. The best berth is in a depth of 20m, excellent holding ground, with the light tower bearing 305°. Small vessels may anchor closer inshore.

8.38 Onundarfjordur (66°06'N., 23°43'W.), entered 5 miles NNE of Fjallaskagi, extends 11 miles SE but its inner part, projecting 3.5 miles from the head, dries. The fjord is surrounded by mountain ranges, which rise precipitously, and its S shore is broken by several valleys. It has not been fully surveyed; however, depths in the fjord are generally less than 37m, and, in most places, the holding ground is not good.

The entrance lies between a point, located 4 miles NNE of Fjallaskagi, and Saudhanes, 3.5 miles NE. The S entrance point is formed by the steep N slopes of, Bardi, a mountain mass which rises precipitously to a height of 487m. A light is shown from Saudhanes and reefs extend up to 0.25 mile from the point.

Flateyri (66°03'N., 23°31'W.) (World Port Index No. 00180), a low and shingle-covered spit, extends 0.5 mile SSE from the NE shore of the fjord, 5 miles within the entrance. A trading station is spread out along the spit facing the small bay formed E of it. A light is shown from a building standing at the S end of the spit.

A quay projects from the E side of the end of the spit. Its head and N sides have berths 52m long with depths of 3 to 5m alongside. A breakwater is reported (1990) to have been constructed. Anchorage may be obtained, in a depth of 15m, with the extremity of the spit bearing about 250°; however, the holding ground is poor, being composed of ooze.

Caution.—A submarine cable lies across the fjord in the vicinity of Flateyri.

Vessels anchoring off Flateyri must leave plenty of room for veering cable as the wind, at times, blows out of the fjord with great strength.

8.39 Sugandafjordur (66°08'N., 23°38'W.) is entered between Saudhanes and Goltur, a remarkable steep and flat topped headland, 2.5 miles NE. The fjord indents the coast for 6.5 miles, but only its outer 2.5 miles are navigable. The inner section is obstructed by a sandbar which can be crossed by only small boats.

Sudureyri, a trading station, stands on a spit at the S side of the fjord, close W of the sandbar. Numerous fish drying sheds stand in the station. There is a small harbor protected by a breakwater and used only by fishing vessels. Cargo can be discharged alongside the breakwater in a depth of 2.4m.

Lightbuoys are moored 365m E and 820m ESE of the head of the breakwater. Lighted range beacons, bearing 133°, indicate the approach channel.

Anchorage may be obtained, in a depth of 8m, good holding ground, about 0.4 mile NW of the station.

Stigi (66°12'N., 23°28'W.) is located 4 miles NE of Goltur. Anchorage may be obtained in two coves, which are located along this stretch of coast, but they are not recommended as the sea is never calm.

Goltur Light is shown from a tower, 14m high, standing on the coast about 1.3 miles NE of Goltur.

Local Magnetic Anomaly.—Abnormal variations of 4.5°W and 2°W of the normal were observed (1938) in positions located about 6 miles W and 5 miles N of Goltur Light.

8.40 Isafjardardjup extends for 30 miles in a SE direction and is the largest fjord of all the Vestfirðir. It is deep and surrounded by mountains which rise steeply from the shores. The SW side is indented by numerous narrow tributary fjords, some of which extend for a considerable distance S and SSW. Local knowledge is necessary for entering these tributary fjords.

The entrance lies between Stigi and Ritur, 12 miles NE, and is easily identified by two steep mountain ranges.

Stigahlid, on the S side, are steep mountain slopes which form the shore of the fjord for 5 miles E of Stigi.

Ritur is a steep headland, 480m high. It is easily identified by a deep notch, which is prominent from N and S, located near the NW extremity. Foul ground fronts this headland. Graenahlid is a mountain range which extends 5 miles E of Ritur and forms the N shore of the fjord.

Drangajokull, 924m high, is a huge glacier located 25 miles ESE of Ritur. It dominates the background.

Snaefjallaheidhi is a snow-covered and mountainous promontory which divides the main fjord, 9 miles within the entrance. Snaefjall, a peak 792m high, stands on this promontory.

Bjarnagnupur, a steep point 422m high, is located 9.5 miles SE of Ritur. It is the W extremity of Snaefjallaheidhi.

Ice.—As this fjord is the first large opening to the S of Horn (North Cape), the polar ice often enters. It presses into the fjord in great masses and completely prevents navigation during the early months of the year, sometimes remaining until the end of July. Careful observations should be made of the ice and, as soon as a movement is seen in the pack, vessels should hasten S to beyond Patreksfjordur.

Tides—Currents.—The resultant of the N-flowing ocean current and the tidal current almost always sets in along the S side of the fjord. On the N side, the resultant current always sets out. Off Ritur, there is frequently a rapid tidal current which should be avoided by small vessels.

Caution.—Heavy squalls are frequent off the mountain slopes in the outer part of the fjord.

Because the fjord is deep, there are no anchorages in the main fjord. However, small vessels, with local knowledge, sometimes obtain temporary open anchorage on a narrow shelf at a few places along the shore.

Bolungavik (66°10'N., 23°14'W.), a trading station, is situated in the W corner of a small cove on the S side of the fjord, 6 miles E of Stigi. A light is shown from a tower, 9m high, standing on the SE entrance point of the cove and a radio mast is situated near it. Tradharhorn, a prominent mountain 635m high, stands at the E end of Stigahlid, close W of the

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station. A breakwater projects 183m E from the shore at the station. Its S side has a berth with a depth of 7m alongside and is used by coastal vessels. Another breakwater extends NE from the shore and forms a sheltered harbor. This breakwater has berths for small craft on its inner face. It is reported that vessels up to 3,260 dwt and 81m in length have been handled.

Hnifsdalsvík, a small cove, is located 3.25 miles SE of Bolungavík. A settlement and trading station, known as Hnifsdalur, is situated at the head of this cove. Reefs and foul ground front the E entrance point of the cove and it should not be approached.

Winds from NE, through E, to ESE, send a heavy sea into the cove.

A fish factory is situated close S of the E entrance point and a jetty, with berths for fishing vessels on its S side, extends 100m E from the shore.

Anchorage may be obtained, in depths of 11 to 13m, fine brown sand, within the cove, about 0.5 mile offshore. Vessels require local knowledge and this anchorage should only be used in the fine-weather season.

8.41 Skutulsfjörður (66°06'N., 23°05'W.), an inlet, is entered between Hnifsdalsvík, on the W side, and Arnarnes, 2 miles ESE. It trends SSE for 3.5 miles between high mountains to the drying flats at the head.

A light, indicating the approach, is shown from a tower, 6m high, standing on the extremity of Arnarnes. An aeronautical radiobeacon is reported to transmit from a mast, 91m high, standing close WSW of the light tower.

A reef, which dries, extends 230m N from Arnarnes and shoal depths of 5.5m or less extend up to 825m NNE and 548m NW from the point.

A small jetty, 24m long, is situated on the W side of the inlet, about 365m within the entrance; it is used by fishing vessels.

Caution.—Dangerous wrecks lie 2.5 and 4.75 miles N of Arnarnes. The S wreck is marked by a lighted buoy.

Isafjörður (66°04'N., 23°07'W.) (World Port Index No. 00190), a fishing center, lies 1.75 miles within the entrance of the inlet. It is situated on a spit which extends 640m SE then 0.5 mile SW from a point on the W shore. A shallow shoal extends 0.25 mile N from the NE elbow of this spit. Another shoal extends S from the S extremity of the spit to almost the opposite shore and forms, Pollurinn, an enclosed harbor at the inner end of the inlet. The entrance channel is indicated by a number of lighted ranges. An airstrip is situated on the S side of the inner harbor.

Sundahöfn, a small harbor sheltered by breakwaters, is located close S of the elbow of the spit. There is a wooden wharf 55m long with a depth of 4m alongside.

Sundin, a narrow channel, leads into Pollurinn. In places, the fairway is only 45m wide.

Asgeivssons Wharf, the main quay in Pollurinn, is 260m long with depths of 6 to 8m alongside.

Sundabakki, a new wharf 220m long with depths of 7 to 8m alongside, has been constructed at Sundahöfn.

Vessels up to 7,000 grt and 130m in length and coastal tankers up to 3,000 grt can be accommodated.

Tides—Currents.—Tides rise about 2.2m at springs and 1.6m at neaps.

Pilotage.—Pilots are available and vessels are advised to employ them. Pilots may be contacted by Radio TFZ 2182 kHz and VHF on channel 16.

Anchorage.—Vessels not entering Pollurinn may anchor, in depths of 18 to 22m, within the bay which lies between the N side of the spit and the W shore of the inlet. This anchorage does not freeze, but polar ice may enter. Vessels may obtain anchorage in Pollurinn as convenient, but the holding ground in the N part of the harbor is not reliable.

Caution.—A submarine cable extends across the inlet from the E side of the spit.

Very strong winds sometimes blow either up or down the inlet. The heaviest squalls appear to be those from SE.

Dangers lie close to both sides of the fairway and local knowledge is required. The shoals frequently change and the range beacons are moved as necessary.

8.42 Alftafjörður (66°03'N., 22°58'W.) is entered between the steep coast curving S from Arnarnes and Kambsnes, the N extremity of a narrow promontory, 4 miles SSE of Arnarnes. It is narrow and extends 6 miles SSW. Kambsnes is fringed by a reef.

Sudavík, a trading station, is situated on the W side of the fjord, about 4 miles SSE of Arnarnes. It is fronted by a small harbor protected by breakwaters.

Langeyri, a small spit with a red house on it, projects from the shore, 0.75 mile S of Sudavík. Anchorage may be obtained, in a depth of 27m, good holding ground, about 185m offshore, close S of the spit. Local knowledge is required.

Kofri, a prominent mountain 635m high, stands close SW of the spit.

Hattareyri, another small spit, projects from the SE shore, 2.5 miles SSW of Langeyri. Anchorage is obtainable, in a depth of 18m, close S this spit.

Seydisfjörður (66°02'N., 22°55'W.) is entered close E of Alftafjörður and extends 4.5 miles S. Its head is liable to freeze in winter. Tjaldtangi, the E entrance point, is the N end of a narrow promontory. Hestur, a prominent mountain 546m high, stands 2.5 miles S of it.

Eyri, (66°01'N., 22°55'W.) a settlement with a church and several houses, is situated on a small spit projecting from the W side of the fjord, 2.5 miles S of Kambsnes. Anchorage may be obtained, in a depth of 22m, good holding ground, close S of the spit. Local knowledge is required.

Vigur, a narrow islet, is located 1 mile NE of Tjaldtangi. A reef connects the islet to the point.

Hestfjörður is entered 2.5 miles S of Vigur and extends 6.5 miles SSW. Its entrance is encumbered by reefs and rocks, which extend S from Vigur, and the fjord can only be used by small boats.

Skotufjörður (66°03'N., 22°48'W.) is entered between Vigur and Ogurnes, a sharp point 1.5 miles E. It extends 7 miles S between steep mountains. It is deep but there are no trading stations within this fjord.

Caution.—Several submarine cables lie in the vicinity of Vigur and in the entrances to Hestfjörður and Skotufjörður.

8.43 Digranes is located 6.5 miles SE of Ogurnes. Between these points, the S shore of the fjord is generally steep, broken

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by several small bays and coves, and fronted by rocks and reefs.

Ogur, a settlement with a church and school, is situated within Ogurvík, a cove, located 1.25 miles SE of Ogurnes.

Aeðey (66°05'N., 22°40'W.), a comparatively low island, is located 4.5 miles NE of Vigur. It is separated from the N shore of the fjord by a channel, less than 0.5 mile wide. A small islet, connected to the island by a reef, is located in the S part of this channel. A narrow passage, with a depth of 7.3m, leads between this small islet and the mainland. An overhead cable, with a vertical clearance of 14m, spans this passage.

A light is shown from a tower, 13m high, standing on the S end of Aeðey.

Breidasker, a group of three dangerous rocks surrounded by foul ground, lies centered about 3.25 miles SSE of the S extremity of Aeðey. Reefs extend from this group to the S shore of the fjord.

Mjölfjörður is entered between Digranes and Vatnsnes, 1 mile E. This fjord trends SSE for 10 miles, but only the first 3 miles are navigable. Its head freezes in winter. A low islet is located 3 miles within the entrance of the fjord and reefs extend from it to both shores. An overhead cable spans the fjord and several submarine cables lie across the fjord in the vicinity of the islet.

Reefs surround Vatnsnes and extend up to 0.5 mile N of the point.

Kaldalon, a small fjord, is entered 5 miles ESE of Aeðey and branches NE from the main fjord. It is for the most part shallow and foul and should not be entered.

8.44 The head of Isafjörður is entered between Vatnsnes and Melgraseyri, 3 miles S of the entrance to Kaldalon. It curves gradually for 16 miles from SE to SW. Borgarey, an island 32m high, lies in the fairway, 1.5 miles ESE of Vatnsnes. It is steep-to except on its N side, where rocks extend up to 1 mile N. Vessels generally use the passage leading E of the island.

Vatnsfjörður, entered 2 miles SSE of Vatnsnes, is a small and shallow fjord of little importance.

Reykjarfjörður is entered 3.5 miles SSE of Vatnsnes and its entrance is encumbered by submerged rocks. A peninsula forms the E side of this fjord and steam, constantly rising from hot springs, may be always observed near its N extremity.

Isafjörður, which forms the actual head of the main fjord, is entered E of Reykjarfjörður. Arngerðareyri, a small settlement, is situated on the E side of the fjord, about 2.5 miles S of the entrance to Reykjarfjörður. Anchorage may be obtained off the settlement, but the bottom shelves so steeply that a vessel 60m in length would have to anchor in a depth of over 46m. Vessels may therefore prefer to anchor, in depths of 18 to 22m, at the opposite side of the fjord.

Caution.—A submarine cable lies across the fjord, about 0.5 mile N of the settlement.

Local knowledge is required for proceeding to and anchoring off Arngerðareyri.

8.45 Jokulfirðir, on the NW side of Isafjardardjup, is entered between Bjarnagnupur and Slettaeyri, 4 miles N. It trends E for 15 miles to Hrafnarfjörður, at the head. Reefs and

shoal water extend up to 275m S from Slettaeyri and a light is shown from the point.

Hesteyrarfjörður, Veidileysa, and Lónafjörður, three branch fjords, indent the N side of Jokulfirðir and Leirufjörður, a small branch, indents the S side.

During gales or when polar ice is coming down the coast, anchorage is obtainable within Hesteyrarfjörður. However, it is subject to strong E squalls and W winds raise a heavy swell. Anchorage is also available within Veidileysa but it is seldom used. Local knowledge is required for proceeding into and anchoring in these branches.

Ice.—In years of heavy incursion of polar ice, Jokulfirðir and the subsidiary fjords, except Hesteyrarfjörður, are liable to be filled with polar ice. Hesteyrarfjörður is kept clear of polar ice by tidal currents.

8.46 Horn is located 18 miles ENE of Ritur. The coast between is remarkable and consists of five high, steep, and salient points, separated by bays which have no great depths in them.

Caution.—In stormy weather or when the tidal current is opposed to the wind, heavy tide rips may extend seaward for several miles from the coast between Ritur and Horn. These tide rips are extremely dangerous to vessels of even moderate size and should be avoided.

An area of foul ground patches, lying between about 15 and 40 miles offshore, extends W, NW, and N of Straumnes and may best be seen on the chart.

Straumnes (66°26'N., 23°08'W.), a high headland, is located 4.5 miles NNE of Ritur. A light is shown from a tower, 24m high, standing near the extremity of the headland.

Local Magnetic Anomaly.—An anomaly of up to 10°W has been observed in a position about 4 miles W of Straumnes. A deflection of 3.5°W was observed (1938) in a position about 3 miles NNE of Straumnes.

Adhallvík, a large bay, lies between Ritur and Straumnes and is free of off-lying dangers. Depths within it decrease regularly to the shores. A high and prominent slope of white sand, backed by a steep mountain spur, is located at the head. A derelict settlement is situated in a cove at the S end of the bay. Latravík, a cove, is located at the NE corner of the bay. During bad weather, fishing vessels find temporary anchorage in this bay as it is sheltered from all winds except those between SW and NW.

Kogur, a headland, is located 5 miles ENE of Straumnes and is similar to it. Two coves, in which temporary anchorage may be obtained, lie between these headlands.

The coast extending for 5 miles SE of Kogur is formed by the precipitous slopes of a mountain range and fronted by rocks.

Heljarvíkurbjarg, a high headland with precipitous slopes on its NE side, is located 9 miles E of Kogur. A bay indents the coast between these two headlands and Hlodhúvík, a cove, lies at its head. During fine weather, anchorage may be obtained in this bay by vessels with local knowledge.

Goltur, a group of rocks, extends seaward from the N side of Heljarvíkurbjarg.

Horn (66°28'N., 22°28'W.) is a prominent headland. Its high cliffs rise steeply from the sea and drying rocks extend up to

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365m seaward from the foot. A reef, on which the sea breaks, extends up to 0.25 mile W of the headland.

Local Magnetic Anomaly.—An anomaly of 10° from the normal has been observed in a position about 4 miles N of Horn.

North Coast

8.47 The N coast of Iceland, between Horn and **Langanes** (66°23'N., 14°32'W.), is heavily indented, especially towards the W part where it is steep and rugged. The coast is backed by high mountains and the bays and fjords penetrate for considerable distances into the land.

The fjords seldom freeze over, except at their heads, but drifting pack ice often interferes with navigation. Ice conditions as related to specific ports are discussed with each port. Fog is more common than on the W coast, occurring approximately 11 days per month.

The entire N coast is fronted by a succession of banks alternating with deeps which may be seen on the chart. In most cases, the banks are submerged extensions of projections on the coast. The nature of the bottom varies considerably, being mostly sand, shells, and pebbles on the banks, and soft mud in the deeps, though boulders are to be found scattered about everywhere.

Tides—Currents.—At Horn, the warm current, which runs N along the W coast of Iceland, turns E and follows the N coast. The flood tidal current sets in the same direction, so that on this coast, as on the W coast, the resultant of the E-going tidal current is markedly stronger than that of the W-going tidal current.

Caution.—At certain times of the year, numerous fishing vessels may be encountered in the vicinity of the banks which lie off this stretch of coast.

8.48 Kalfatindur, a high and narrow point, is located 1.5 miles SE of Horn. Rocks front this point which is backed by a prominent mountain, 532m high.

Hornbjarg Light (66°25'N., 22°23'W.) is shown from a tower connected to a dwelling, 10m high, standing on the coast, 2.5 miles SSE of Kalfatindur.

Drifandifoss, a high and conspicuous waterfall, is located 2.75 miles SE of Hornbjarg Light.

Bardi, a point fronted by rocks, is located 5 miles SSE of Hornbjarg Light. Smidjuvik and Bardsvik are small bays which lie, respectively, on the NW and S sides of this point.

Straumnes (66°20'N., 22°12'W.) is the SE entrance point of Bardsvik. It is foul for up to 2.5 miles offshore.

Between Straumnes and the entrance to Ingolfssfjordur, 21 miles SE, numerous bays and fjords indent the coast. However, all of their approaches are encumbered with shoals, reefs, and rocks which extend up to 10 miles seaward in places. Strandabrekar is the name given to the area fronting the coast in which these dangers lie. The fjords are also exposed to onshore winds and fill rapidly with ice.

Odinsbodi, a rocky shoal over which the sea breaks, lies 12 miles ENE of Straumnes. It is the N of the dangers within Strandabrekar.

Drangasker, a high rock, lies on foul ground about 2.5 miles offshore, 11 miles SE of Straumnes. It is surrounded by reefs, prominent, and can be easily identified.

Drangaskordh, a row of pointed peaks, stands on the NE end of a steep promontory, 14.5 miles SE of Straumnes. The peaks, which rise to heights of 372m, are rocky and very conspicuous from N or S.

Drangajokull, a prominent mountain 930m high, stands 10 miles SSW of Straumnes.

Caution.—Vessels should give Strandabrekar, the area encumbered with dangers, a wide berth.

8.49 Ingolfssfjordur (66°02'N., 21°38'W.) is the W harbor on the N coast of Iceland. It is entered between Seljanes and Munadarnes, the NW extremity of a small peninsula, about 1 mile NE. The fjord is 3.5 miles long and a small trading station is situated on its E side, near the head.

A group of five small islets, surrounded by numerous rocks, extends up to 1 mile NNW of Munadarnes. Kalfatindur, a prominent mountain with two peaks, rises to a height of 645m near the middle of the small peninsula.

Selsker (66°08'N., 21°32'W.), a steep-to rock 5m high, is located 4 miles NE of Munadarnes at the SE end of Strandabrekar. Foul ground lies off its N and NE sides and shoal patches extend up to about 3.5 miles N of it. A main light is shown from a prominent tower, 16m high, standing on the rock. A racon is situated at the light tower.

Ofeigssfjardharsker, a group of rocks, lies 3.5 miles W of Selsker. A reef extends 1 mile NE from the N end of the group. Hnuasker, a large rock marked by a beacon, is located at the E side of the group.

Vessels approaching the entrance to the fjord from E should steer to pass S of Selsker. Vessels entering the fjord require local knowledge.

A main wharf, 37m long with a depth of 5.8m alongside, is situated at Eyri, the trading station. A pier extends 45m from the shore and has a depth of 8.5m alongside its head. Anchorage can be obtained, in a depth of 20m, good holding ground, off the head of the fjord.

It was reported (1991) that the trading station was deserted.

Local Magnetic Anomaly.—An anomaly has been reported to exist within an area centered about 2 miles NE of Selsker.

8.50 Krossnes (66°03'N., 21°30'W.), the SE extremity of the small peninsula, is located 3.5 miles SE of Munadarnes. The N and E shores of the peninsula are fringed by rocks.

Trekylisvik, a small bay, is entered between Krossnes, and Reykjaneshyrna, 2.5 miles SE. A conspicuous isolated hill, 316m high, stands on Reykjaneshyrnala.

Illagrunn, a shoal with a least depth of 9.5m, lies in the approach to the bay, about 1 mile N of Reykjaneshyrnala. The sea is reported to break heavily over this shoal.

Arnesey, a small island fringed by a reef, is located close off the S shore of the bay, 2 miles W of Reykjaneshyrnala.

Nordhurfjordhur, an inlet, is located at the NW corner of the bay. Vessels, with local knowledge, can obtain anchorage, in depths of 8 to 9m, good holding ground, off a prominent detached rock at the N side of this inlet.

In 1991, it was reported that a trading station with a wharf, 40m long, had been constructed on the N shores of the inlet.

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8.51 Hunafloi (66°00'N., 21°00'W.), a large bay, is entered between Reykjaneshyrna and Rífsnes, the NW extremity of the Skagi Peninsula, 24 miles ENE. The bay extends S for more than 50 miles to the head of Hrútafjörður, its S branch. The W and S shores are indented by numerous branch fjords and small inlets, but the E shore has a comparatively even coast line. With the exception of Skagi, the shores of Hunafloi are mountainous.

Winds—Weather.—Winds from the N and NE are the most frequent in Hunafloi and are usually accompanied by fog.

Ice.—The drift ice, which appears first along the N coast of Iceland at Horn, is sometimes carried into Hunafloi by the strong current which enters the bay along the W side. Ice in small masses is frequently carried far in, even against a moderate gale. Sometimes navigation may be impeded well into the summer.

Tides—Currents.—The flood tidal current flows in along the W coast of Hunafloi and out along the E coast. The ebb tidal current, which is much weaker, takes the reverse course. The white glacier water, which is carried down the rivers and discharged into the bay, is always found, in summer, along the E side, frequently far out beyond Rífsnes.

Local Magnetic Anomalies.—Abnormal variation has been reported to exist in areas lying about 6 miles NNE, between 10 and 15 miles ENE, and about 17 miles SE of Reykjaneshyrna. Compass needles have been deflected from 10°W to 21°W of the normal, but in some places the magnetic compass appeared to be quite dead.

Caution.—Navigation in the approaches and within Hunafloi is often difficult because of the frequent fogs, the irregularity of the bottom, and the unreliability of the magnetic compass in this area.

8.52 Hunafloi—West Side.—Djupahleinn (65°59'N., 21°20'W.) is located 3 miles SE of Reykjaneshyrna. The coast between is fringed with rocks and reefs which extend up to 0.75 mile offshore. Gjögur Light is shown from a framework tower, 24m high, standing 0.5 mile N of the point. An aeronautical radiobeacon is situated 0.5 mile W of the light tower.

Orkin, a prominent mountain 634m high, stands 2.75 miles W of Gjögur Light.

Barmar, a detached reef with a least depth of 2.8m, lies about 2.25 miles ENE of Gjögur Light. Hornalsflaga, a rocky shoal with a depth of 4.3m, lies about 0.5 mile SW of Barmar.

Reykjarfjörður is entered between Djupahleinn and Kambur, 2.25 miles SW. It is deep and extends 6 miles WSW. Reykjarfjardarkambur, a conspicuous mountain 549m high, stands on the S side of the fjord, 3.25 miles SW of Gjögur Light.

A small settlement, known as Gjögur, is situated 0.5 mile W of Djupahleinn. Vessels, with local knowledge, can anchor, in a depth of 27m, close S of this settlement.

Djupavík (65°57'N., 21°34'W.), a fishing settlement, is situated on the S side of the fjord, near the head. A large herring oil factory stands at the settlement and three piers project from there, having depths up to 6.1m alongside.

In 1991, it was reported that the factory had closed and the settlement was deserted.

Veidhileysufjörður is entered between Kambur and Byrgisvíkurnes, 1.75 miles SE. It is mostly unsurveyed and seldom used. A chain of submerged rocks extends N from Byrgisvíkurnes and Midhfardharbóðhi, a shoal with a depth of 4.3m, lies in the middle of the entrance, close NW of the N end of the chain.

Byrgisvíkurfjall, a conspicuous mountain 744m high, stands on the S side of Veidhileysufjörður, 4 miles S of Gjögur Light. Kolbeinsvíkurfjall, a prominent mountain 776m high, stands 1.5 miles S of Byrgisvíkurfjall.

Bjarnarfjörður (65°46'N., 21°23'W.), a small fjord, indents the coast 10 miles S of the entrance to Veidhileysufjörður. The coast between is fronted by reefs and rocks extending up to 1 mile offshore. Sveinbjarnargrunn, an isolated shoal patch with a depth of 11m, lies about 3 miles offshore, 6.5 miles SE of Byrgisvíkurnes.

Kaldbaksvík, a small inlet, indents this stretch of coast, 4 miles S of Byrgisvíkurfjall and Kaldbakshorn, a mountain 508m high, stands near its S entrance point. A low and prominent waterfall is located at Asparvík, 3.75 miles S of Kaldbaksvík.

Bjarnarfjörður is shallow and both the approaches and the fjord is encumbered with small islets, rocks, and reefs which may best be seen on the chart.

Bjarnarnes (65°45'N., 21°21'W.), a projecting point, is located on the S side of the entrance to Bjarnarfjörður. A prominent church, with a steeple, stands on the S side of the fjord, 2 miles WNW of the point.

Storibóðhi, a large group of rocks and shoal patches, lies about 2.75 miles ENE of Bjarnarnes and is the outermost danger off the approach to Bjarnarfjörður.

Malarhorn (65°41'N., 21°26'W.), a prominent point, is located 4 miles SW of Bjarnarnes and appears from seaward as a detached rock. A light is shown from a hut standing on the point. Bæjarfell, a steep mountain 345m high, stands close NNW of the point.

Grimsey, an island, is located on the N side of the approach to Steingrímsfjörður, 0.75 mile SE of Malarhorn. A deep channel lies between the W shore of the island and the mainland. A main light is shown from a tower, 10m high, standing at the center of the island and a beacon stands at the NE end. A bank with rocks extends up to about 0.5 mile S from the S end of the island and a low detached rock lies about 365m E of the E side.

Ingólfsgrunn, a group of three rocky shoals, lies between 5.5 and 6.5 miles ENE of Grimsey and is usually marked by breakers.

Dagmalagrunn, a rocky shoal with a least depth of 3.7m, lies about 2 miles E of the N end of Grimsey. Trollesgrunn, a rocky patch with a depth of 10.6m, lies 1.25 miles SW of Dagmalagrunn and the sea breaks on it in heavy weather.

Svartafossdjup, a deep entrance channel, passes between Dagmalagrunn and Ingólfsgrunn.

Steingrímsfjörður, entered between Malarhorn and Smahamrar, 3 miles SSW, extends W and NW for about 11 miles. The natural beauty of the fjord is in sharp contrast to the dreary and barren N coast approach. Although the depths in this fjord are considerable, it is seldom used.

Holmavík (65°42'N., 21°41'W.), a small trading station, is situated in a cove on the W shore of the fjord, 6 miles W of

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Malarhorn. A small harbor, protected by a breakwater, fronts the station. A light is shown from a structure, 3m high, standing close WSW of the station. In 1991, it was reported that a pier has a berth 45m long with a depth of 6m alongside. Anchorage may be obtained off the station, in a depth of 33m, good holding ground, but local knowledge is required as rocks lie close to the berth.

Anchorage may also be obtained, in depths of 26 to 38m, off Hrofberg, at the head of the fjord.

8.53 Hunafloi—East Side.—Rifsnes (66°05'N., 20°26'W.), the E entrance point of Hunafloi, is the NW extremity of the Skagi Peninsula. A beacon stands on the point. Skallarif, a sandy shoal, extends up to 2.5 miles NW from the point. In heavy weather, the entire shoal covers with breakers.

Kalfshamar, a projecting point with a cove on its S side, is located 4 miles S of Rifsnes. A light is shown from a tower, 16m high, standing near the extremity of the point.

Bjargarstapi, a large rock covered with guano, is located 2.75 miles SSE of Kalfshamar. It lies close to the N side of the mouth of a stream. A waterfall is located a short distance up this stream and is conspicuous from seaward.

Hofsgrunn, a rocky shoal patch with a least depth of 5.9m, lies centered about 2.25 miles WSW of Bjargarstapi. During stormy weather, the sea breaks over this whole patch.

Skagastrond (65°50'N., 20°19'W.) (World Port Index No. 00240), is situated on the S side of a small peninsula, 11.5 miles SSE of Kalfshamar. The peninsula is steep-to on its W side and very prominent. The trading station, sometimes known as Hofdhakaupstadhur, stands on the N shore of the bay formed by the peninsula. A settlement, known as Holanes, stands on the E shore of the bay and is prominent. The S part of the bay is encumbered by rocks.

A small harbor, suitable for small craft with drafts up to 3.7m, is formed by two jetties on the N side of the bay. The entrance fairway is indicated by range lights. A beacon stands on the SW end of the peninsula and a light is shown near it when a vessel is expected. Anchorage can be obtained, in a depth of 13m, good holding ground, 0.25 mile SSW from the SW end of the peninsula. However, this anchorage is not good in unsettled weather as there is no shelter from onshore gales.

Spakonufellsborg, a prominent mountain 646m high, stands 2 miles ENE of Skagastrond.

Solvabakki, a small settlement, stands 7.5 miles S of Skagastrond. The coast between is fringed, in places, with small islets, rocks, and shoals. Hafstadabodi, an isolated shoal with a depth of 6m, lies 1.5 miles offshore, about 2.5 miles SSW of Skagastrond. The sea breaks over it in heavy weather. Ytriey, an islet, is located close offshore, 3.5 miles S of Skagastrond.

A conspicuous high church building stands 0.5 mile inland, about 2 miles NNE of Solvabakki.

8.54 Hunafjordur, a bight open to the N, is entered between Solvabakki and Brandstangi, 8 miles WSW. The E and W shores of this bight are backed by mountains. The head consists of extensive sandflats formed by the silt of several rivers.

Rocks and foul ground fringe the shore to the N and NW of Brandstangi.

Blonduos (65°40'N., 20°18'W.) (World Port Index No. 00230), a settlement, stands on both sides of a glacial river, 3 miles S of Solvabakki. A concrete pier projects 80m from the shore, close N of the mouth of the river. It has a berthing head 9m long with a depth of 5m alongside.

Anchorage may be obtained, according to draft, in the roadstead off the settlement, but it is very exposed.

It is reported that a radiobeacon is situated about 2 miles N of Blonduos.

Selsker, a shoal patch that dries, stretches 1 mile seaward from the edge of the sandflats at the SW corner of Hunafjordur. Lambhusavik, a small cove, is located SW of Selsker and affords anchorage, in depths of 13 to 15m, close inshore to small vessels with local knowledge.

Trollakirkja, a snow-covered mountain 829m high, stands about 10 miles inland of the head of Hrutafjordur and is very conspicuous.

8.55 Vatnsnes (65°40'N., 20°41'W.), a mountainous promontory, separates Hunafjordur from Hunafloi. It rises to high mountain ridges that falls in terraces to the sea. Brandafell, 743m high, stands 9.5 miles SW of Brandstangi and is the highest of these mountains. A cove, open to the N, is located close W of the N extremity of this promontory.

Langasker, an above-water rock, lies on foul ground that extends 1 mile N of the N extremity of Vatnsnes. The N coast of this promontory is fronted by rocks and shoals.

Faskrudssker, an islet, is located 1.5 miles NNW of the N extremity of Vatnsnes. A shoal patch with a depth of 7.5m, lies about 0.5 mile N of it.

Caution.—An area, in which several dangers lie, extends up to 8 miles NNW, W, and SW of the N extremity of Vatnsnes. Vessels, without local knowledge, are advised to avoid this area.

Eversgrunn, a shoal with a least depth of 11m, lies about 6 miles NNW of Faskrudssker at the N side of the above mentioned area. A rock with a depth of 2.7m, lies about 1.5 miles S of this shoal. Both of these dangers break heavily in N gales.

Fyllugrunn, a group of rocky shoals with a least depth of 2.8m, lies about 7 miles WNW of Faskrudssker at the W side of the above mentioned area. Tjarnarbodi, a rocky shoal with a least depth of 3.7m, lies about 1 mile SE of Fyllugrunn.

Illugastadasker, a rocky shoal patch with a least depth of 0.6m, lies about 6 miles S of Fyllugrunn at the SW side of the above mentioned area.

Burfellsrenna is the deep entrance channel which passes between Fyllugrunn and Ingolfssgrunn.

8.56 Hunafloi—Inner Section.—The inner section of Hunafloi is entered between Smahamrar, the S entrance point of Steingrimsfjordur, and the N extremity of Vatnsnes. The area fronting the shore on either side of the entrance to the fjord is foul. Vessels entering this section of the fjord require local knowledge.

Kollafjordur, is entered between Kollafjardarnes, located 2.75 miles SE of Smahamrar, and Broddanes, 1 mile ESE. The fjord is unsurveyed and its entrance is encumbered with shoals and reefs. Broddanesey, an islet marked by a beacon, is located

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0.5 mile N of Broddanes. Rocks and reefs, some marked by beacons, extend up to 1.25 miles N and NE of this islet.

Ennishofdi, a headland 263m high, stands on the E side of the entrance to Kollafjörður. Ennisstigi, a conspicuous solitary rock, is located at the NE extremity of this headland. Shoals extend up to 1 mile from the shore in the vicinity of this rock.

Bitrúfjörður (65°29'N., 21°20'W.) is entered between Brekka, located 4.5 miles S of Ennishofdi, and Gudlaugshofdi, 2.5 miles SSE. The fjord extends 5.5 miles SW and its middle is considered to be deep and free of dangers. Ospakseyri, a settlement, stands near a spit on the NW shore at the head. There is a jetty for small craft.

Gudlaugshofdi is a high and conspicuous point. Vigursker, a dangerous rocky shoal with a depth of 4.3m, lies 1.75 miles ESE of the point. Foul ground and rocks lie between this dangerous rock and the shore.

8.57 Hrutafjörður (65°29'N., 21°08'W.), a long and narrow fjord extending 19 miles S, forms the head of Hunafloi. It is entered between Gudlaugshofdi and Skarfatatangi, 5 miles ESE. A low and swampy valley is located at the head of the fjord. A river flows through this valley and discharges into drying mudflats which extend up to 1 mile from the head.

Prestbakki, a low point at the mouth of a small river, is located 9 miles S of the entrance, on the W side of the fjord. A prominent church and a house with a red roof stand near the point. Prestbakkaey, a small island with an islet close NW, is located 0.25 mile NE of the point.

To the S of Prestbakki, the shores of the fjord are fronted by rocks and reefs and the entrance channel is very narrow in places.

Bordeyri, a settlement, stands on the W side, 3 miles from the head. There is no jetty and cargo must be landed on a sandy beach.

Winds—Weather.—The sea breeze, which commences around noon, may send in a heavy sea.

Ice.—It is reported that the ice penetrates to the head of Hrutafjörður, but it is not likely to be dangerous because large pieces ground before they reach the inner part. However ice may remain in the fjord for some time after the polar ice has left the N coast.

Balkastadanes (65°24'N., 21°02'W.) is a narrow and high projection which falls steeply to the sea on all sides. It separates Hrutafjörður from Midfjörður.

8.58 Midfjörður is entered between Heggstadanes, the NE extremity of Balkastadan, and Anastadir, 2 miles ENE. The fjord extends 7.5 miles SSE. It is open to N winds and exposed to incursions of polar ice.

Hvammstangi, a trading station, stands on the E side of the fjord, 4 miles within the entrance. A jetty, 137m long, projects from the shore near the station and has a depth of 3.7m alongside its outer end. There is a small craft basin protected by a breakwater. It is reported that there is also a wharf, 50m long with a depth of 4m alongside. Range beacons indicate the approach and a conspicuous church stands close NE of the station. Anchorage is obtainable, in depths of 13 to 14m, off the station. Local knowledge is required.

Skard Light (65°29'N., 20°59'W.) is shown from a tower, 13m high, standing 1.25 miles N of Anastadir.

From Skard Light to the N extremity of Vatnsnes, the coast is fronted by rocks and reefs.

8.59 Skagata (66°07'N., 20°06'W.), the NE extremity of the Skagi Peninsula, is located 8 miles ENE of Rífsnes. The coast between is fronted with islets, rocks, and shoals which extend up to 1.5 miles seaward. The point consists of a small promontory and is high in comparison with the adjacent coast.

A light is shown from a tower, 9m high, standing on the point. A racon and a radiobeacon are situated at the light tower.

8.60 Skagafjörður (66°00'N., 19°50'W.) is entered between Skagata and Malmey, an island 15 miles ESE. The fjord extends SSE for 18 miles and it then forms into two small separate bays at its head. Depths in the fjord are quite irregular and range from 119m, at the entrance, to 20m at the head. On its E side, flat-top mountains with no prominent feature are seen slopping toward a coastal plain. Two rivers, which empty into the small bays, flow through a wide valley located at the head of the fjord. These rivers form a large delta in the middle of which a narrow and hilly ridge projects N and divides the head into the two bays. Several dangerous rocks and shoals lie in the entrance to this fjord.

Caution.—The polar ice is sometimes a serious obstacle to navigation in Skagafjörður.

Vessels approaching the fjord should give the dangers, which lie off the coasts on both sides of the entrance, a wide berth.

Local Magnetic Anomalies.—Abnormal variation exists within Skagafjörður and in a position about 5 miles NNW of Malmey. It is also reported that the magnetic compass needle is almost dead in the vicinity of Malmey and Drangey.

Ketubjörg, located 6 miles SSE of Skagata, is a hummock, 121m high, which falls steeply to the sea. A prominent waterfall is located on its S side. A conspicuous white church stands at Keta, 1.5 miles N of the hummock.

Selvik, a cove, is located 5 miles SSE of Ketubjörg. A river flows through a gorge at its S side. Small vessels can anchor, in depths of 13m, sand, in the middle of the entrance to this cove. Small craft can obtain better anchorage, in a depth of 7m, closer to the shore.

Between Skagata and Selvik, the coast is fringed with rocks and shoals. Thursaker, a large low rock, is located 0.75 mile E of Ketubjörg.

Instalandsker, a large and low rock, is located 0.5 mile offshore, 8 miles SSE of Selvik.

Tindastoll, a large mountainous mass, stands 2 miles W of the coast, 9.75 miles SSE of Selvik. It rises to a height of 990m and is very conspicuous.

8.61 Malmey (60°00'N., 19°32'W.), a high and narrow island, forms the E entrance point of the fjord. A hill, 156m high, stands at its N end and falls steeply to the sea. A light is shown from a tower, 10m high, standing on a hummock at the S end of the island.

A dangerous reef extends 1.5 miles N from the N end of the island. Malmeyjarbodhi, an isolated rocky patch with a depth of 15m, lies about 2.5 miles N of the N end of the reef.

Thordarhofdi, an isolated headland, is located 2 miles S of the S end of Malmey. It rises to a height of 202m and is

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prominent. A reef, which nearly dries, extends from the headland to the S extremity of the island.

Holmasker, a drying pinnacle rock with a depth of 20m close S, is located 3.5 miles W of the N end of Malmey.

Kvislarsker, a group of three drying rocks fringed by a shoal, is located 4 miles WSW of Malmey Light. Shoals, with depths of 13 and 28m, lie 1.5 and 3.5 miles, respectively, W of Kvislarsker. The sea breaks over these shoals in heavy weather. A rocky patch with a depth of 17m lies 2 miles NE of Kvislarsker.

Drangey, a conspicuous islet 183m high, is located in the middle of the fjord, 5 miles SW of Malmey Light. It has vertical sides and is fringed by a reef. A deep cleft, located at its center, is visible from the N. Kerling, a high and spindle-like rock, lies close off the SE extremity of this islet.

Hofsos, a small trading station, is situated in a cove, 4 miles SSE of Thordarhofdi. A small harbor, with an entrance 46m wide, is formed between a breakwater and a jetty. A wharf, 60m long, has depths of 3.5 to 6m alongside. Anchorage can be obtained, in a depth of 15m, about 185m SSW of the breakwater head.

Kolkuos, a farm, is situated 4.5 miles S of Hofsos at the mouth of a river. Anchorage can be obtained, in depths of 8 to 9m, offshore. There is no jetty and cargo is landed on an open beach. A patch with a depth of 20m lies about 3 miles NW of the farm.

Hegranes, a steep point, is located 5 miles SW of Kolkuos. It forms the N extremity of the narrow ridge that divides the head of the fjord into two small bays. A light is shown from a tower, 10m high, standing on the point.

Lundey, a grass-covered islet 18m high, is located 2 miles ESE of Hegranes in the center of the bay which lies on the E side of the point. This bay is less frequented and the few settlements here are of little importance. No information is available concerning the depths or navigation in this bay.

8.62 Saudarkrokur (65°45'N., 19°40'W.) (World Port Index No. 00250), the most important settlement in the fjord, is situated in the SW part of the bay lying W of Hegranes. A prominent church stands in the S part of the settlement and an airstrip is situated S of it.

A breakwater extends 110m ESE then 200m SE from the shore at the N part of the settlement. Its head divides into two spurs. A group of tanks stand in the vicinity of the root of this breakwater. The main quay, situated on the S side of the breakwater, has a berth 200m long with depths of 5 to 7m alongside. A basin for small craft is located close S of the breakwater. The harbor can be contacted by VHF. The approach to the harbor is indicated by a range which is formed by a beacon and the tower of the church. Lights are shown from these range marks when a vessel is expected.

Pilotage.—Pilotage is compulsory. Pilots meet vessels at a point 400m from the harbor entrance.

Tides—Currents.—Tides rise about 1.3m at springs and 1m at neaps.

Anchorage.—Good anchorage can be obtained, in depths of 5.5 to 9.4m, sand, about 250m SE of the head of the breakwater.

Caution.—Winds from the N blow right into the fjord and frequently do considerable damage.

Silting in the harbor makes frequent dredging necessary.

8.63 Hrolleifshofdi, a detached and flat-topped hummock 87m high, stands on the coast, 2.75 miles ENE of the N end of Malmey. Malmeyjarfjordur, a small bay, is entered between the N end of the island and this hummock. Anchorage can be obtained, according to draft, within this bay by vessels with local knowledge.

Straumnes (66°05'N., 19°22'W.) is located 2.75 miles NE of Hrolleifshofdi. A light is shown from a tower, 9m high, standing on this point.

Hammersbodi and Reksbodi, two small rocky patches with depths of 15m, lie about 4 miles NNE and 4 miles NE, respectively, of Straumnes Light.

Haganesvik, a small cove, is located 5 miles E of Straumnes Light. It has easy access, but both entrance points are foul and should be given a wide berth. Anchorage can be obtained, in a depth of 8m, hard sand, within the cove, but it is exposed to N winds. Haganes, a trading station with a small pier, is situated on the SE shore of the cove.

Saudanes (66°11'N., 18°58'W.), a high and steep point, is located 9 miles NE of Haganesvik. The coast between is fronted by foul ground and backed by mountains which, in most places, fall steeply to the sea. A light is shown from a tower with a dwelling, 10m high, standing on the point. A radio mast stands near the tower.

Illvidhranjukur, the most conspicuous mountain along this part of the coast, rises to a height of 895m, 3.25 miles SSW of Saudanes.

Local Magnetic Anomalies.—Abnormal variations have been reported in positions off the coast between Hrolleifshofdi and Saudanes. Compass deflections of up to 8°E have been observed.

8.64 Siglufjordhur (Siglufjordur) (66°10'N., 18°53'W.) is entered between Saudanes and Siglunes, 2.25 miles ENE. It extends 3 miles S and is flanked by high mountains which fall steeply to the sea. A shoal area, some parts of which dry, lies at the head. The fjord is an important center for the herring fishing industry and one of the best harbors of refuge, along the N coast of Iceland. All other fjords on the N coast is subject to polar ice incursions.

Local Magnetic Anomaly.—Abnormal variations, up to 2°W of the normal, have been observed in an area lying between 1 and 2 miles N of Siglunes.

Caution.—Siglufjordur is notorious for the tremendous squalls that descend from the surrounding mountains.

Siglunes, the E entrance point of the fjord, is a low and flat point which extends 1 mile NW from the foot of Nesnupur, a steep and conspicuous mountain. It is easily recognized as there are no other similar points in the vicinity. A light is shown from a tower with a dwelling, 12m high, standing on the N slopes of Nesnupur, 1 mile ESE of the point.

Hellubodar, a rocky reef, extends about 0.25 mile WNW from the NW extremity of Siglunes. Its inner part dries and the outer part is fronted by a shoal. Vessels should give this reef a wide berth as it has been reported to extend farther W.

Selvikurnef, a small point, is located on the E side of the fjord, 2.25 miles S of Siglunes. A light, indicating the entrance channel, is shown from a tower, 8m high, standing on the point.

Sigluðfjörður (Hvanneyri) (66°09'N., 18°55'W.) (World Port Index No. 00260), one of the largest herring fishery stations in Iceland, is situated on the W side of the fjord near the head.

The port can be contacted by telephone to Captain of the Port on +3549.71237 or 71433; Fax: Captain of the Port +3549.72038; VHF channel 16; 11.

Pilotage.—Pilotage is compulsory. Messages can be sent through Sigluðfjörður (TFX) on RT(2182 kHz) or VHF channel 24, 26 or 27. Pilot boards 200 to 400m from the harbor entrance.

There are numerous small piers for the use of fishing vessels and four main quays.

Oldbrjótur Quay is 125m long with a depth of 6m alongside;

Löndunarbryggjan Quay is 100m long with a depth of 7m alongside.

Baejarbryggjan Quay is 100m long with a depth of 6m alongside.

Togarabryggja Quay is 80m long with depths of 5 to 6m alongside. Vessels up to 3,540 dwt and 85m in length can be accommodated.

Tides—Currents.—Tides rise about 1.3m at springs and 1m at neaps.

Pilotage.—Pilotage is compulsory. Pilots may be contacted by VHF and board about 200m N of the harbor.

Anchorage.—Temporary anchorage can be taken, according to draft, anywhere in the fjord. Vessels may anchor, in depths of 25 to 30m, good holding ground, E of the fishery station.

8.65 Eyjafjörður (66°10'N., 18°30'W.), an important herring fishing center, is the most populous and most frequented of the fjords on the N coast of Iceland. Akureyri, a large town, stands at the head.

The fjord is entered between Siglunes and Gjórgurta, 14 miles ESE. It extends 33 miles SSE and both sides of the outer part are flanked by prominent mountains. Farther S, these mountains become lower and are separated by wide valleys which run down to the shores.

Kaldbakur, a conspicuous mountain 1,167m high, stands on the E side of the fjord, 10.5 miles SSE of Gjórgurta. Arnfinnsfjall, another conspicuous mountain 854m high, stands on the W side of the fjord, 7 miles SE of Siglunes.

Winds—Weather.—As a rule, the winds blow in the direction of the fjord. Heavy mountain squalls are also frequent. In the summer, fairly regular land and sea breezes occur. The N winds, which are the most frequent and strongest, usually begin in the afternoon and last for a few hours. Occasionally at Akureyri, they attain a considerable force. The land breezes, which are seldom of great strength, begin between 0500 and 0600 hours and last only a short time.

Ice.—The fjord is open to incursions of polar ice which, during bad years, have penetrated its entire length.

Tides—Currents.—Along the N coast of Iceland, the E-going tidal current runs in along the W shores and out along the E shores of all the fjords; the W going tidal current runs in the reverse direction. In Eyjafjörður, the resultant tidal current is almost always outgoing as a result of the many rivers and great quantity of melted snow which discharge into it. During the spring thaw, the tidal current may be fairly strong, especially in the channel abreast Hrisey and in the vicinity of

Latur. The outgoing tidal current is always strongest on the E side of the fjord, off the entrance of Eyjafjörður.

Local Magnetic Anomalies.—Abnormal variations, up to about 8°W of the normal, have been observed in the area off the entrance to Hedinssfjörður.

Abnormal variations, between 11°E and 3°W of the normal, have been observed in an area between 2 and 3 miles N of Hrisey.

Caution.—Vessels should exercise caution when passing by or approaching the entrance of this fjord as, at times, a strong inward current has been experienced.

Submarine cables lie across the fjord and may best be seen on the chart.

Vessels are advised to pass W of Hrisey due to the strength of the resultant current on the E side of the fjord.

8.66 Eyjafjörður—West Side.—Hedinssfjörður is entered between Torfuvogar, located 2.75 miles SE of Siglunes, and Thorhildarvogur, 2 miles SE. The fjord extends 2.5 miles SSW and a narrow strip of boulders separates the head from a large lake that drains into it through a small channel. This fjord should only be entered in an emergency as it is entirely open, subject to frequent incursions of drift ice, and has very poor holding ground.

Brik, a small point at the foot of a mountain, is located 3 miles SE of Thorhildarvogur. A light is shown from a tower, 4m high, standing on this point.

Olafsfjörður is entered between Brik and a point, 1.75 miles SE. The fjord extends 2.5 miles SW and should only be entered in an emergency as it is subject to incursions of drift ice and the holding ground is not good.

Kleifar, a small settlement with a jetty for small craft, stands on the NW shore of the fjord. Vessels can obtain anchorage, in a depth of 9m, sand, off this settlement; the berth is indicated by range beacons.

Olafsfjörður (66°05'N., 18°38'W.) (World Port Index No. 00270), a trading station, is situated on the SE side of the head. A small harbor, with an entrance 70m wide, is protected by two breakwaters. A main berth, 200m long with depths of 4 to 6m alongside, is situated on the inner side of the E breakwater.

Dalvík (65°58'N., 18°31'W.), a small trading station, is situated at the head of a wide bay, 7.5 miles S of Olafsfjörður. A prominent church, with a steeple, stands at the station and another church stands close WNW of it. A small harbor, with an entrance 45m wide, is protected by breakwaters. There is a total of 250m of main berthing space with depths of 5 to 7m alongside. Anchorage can be obtained, in depths of 22 to 26m, 1.25 miles E of the N church.

Arskogssandur, a small settlement, is situated 5 miles ESE of Dalvík. It is fronted by a small pier from which a light is shown. It is reported that a ferry runs between this settlement and Hrisey.

Hauganes, a small settlement, is situated 1.75 miles SSE of Arskogssandur. A breakwater, with berths for fishing vessels on its inner side, projects from the settlement. Holl, a rock with a depth of 3.7m, lies about 0.25 mile ESE of the settlement.

Eyjafjörður—East Side.—Gjórgurta, the E entrance point of the fjord, is the N extremity of a large mountainous projection which rises to a height of 738m, about 2 miles S. A light is shown from a tower, 4m high, standing on the point.

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Latur, an isolated rock 11m high, rises vertically about 185m offshore, 3 miles SSW of Gjogurta. Latur Farm is situated on the coast, about 1 mile S of this rock. The shore of the fjord in the vicinity of Latur is fringed by a chain of rocks, some of which dry.

Hofdi, a bold headland 261m high, projects from the coast of the fjord, 12 miles SSE of Latur.

Grenivik, a trading station, is situated at the head of a small bay on the N side of Hofdi. Four small jetties, with shallow depths alongside, are situated in the NE corner of the bay. Temporary anchorage may be obtained, in depths of 18 to 27m, in the bay, but winds from between N and W raise a heavy swell.

It is reported (1992) that a fish factory with a pier has been constructed close N of Grenivik.

8.67 Hrolfssker (66°05'N., 18°25'W.), consisting of two small rocks, lies on a shoal in the middle of the fjord, 3.5 miles SW of Latur. A light is shown from a tower, 16m high, standing on the larger rock which is 6m high.

Hrisey (66°00'N., 18°23'W.), a narrow island, lies in the middle of the fjord with its N extremity located 3.5 miles S of Hrolfssker. It has a high and steep coast, except in the SW part where it slopes gradually to a flat beach. Reefs and rocks extend up to 183m N from the N extremity of the island. Longubodhi, a patch with a depth of 14.2m, lies about 1.25 miles NNW of the N extremity.

A light is shown from a tower, 9m high, standing near the E side of the island, 0.75 mile SSE of the N extremity.

Sydhstibaer, a trading station, is situated along the S end of the island and fronted by several small jetties with depths of 3.7 to 5.5m alongside. An airstrip is situated 0.5 mile NW of the station.

Eyjaffjördur—Inner Section.—The inner section of the fjord is entered between Hauganes and Grenivik.

Hjalteyri (65°51'N., 18°12'W.) (World Port Index No. 00300), a settlement situated 5 miles SE of Hauganes, stands on a low sandbar which encloses a lagoon. A light is shown from a tower, 13m high, standing at the settlement. A racon was reported (1986) to be situated at the tower. A large herring factory with several piers fronts the settlement. The main wharf

has a length of 30m and a depth of 5.5m alongside. Anchorage can be taken, in depths of 27 to 40m, close S of the settlement.

It was reported (1990) that the factory and settlement were closed down.

Horgargrunn, an extensive sandbank marked by a lighted buoy, lies off the mouth of the Horga River, 3.5 miles S of Hjalteyri. Caution is advised as this bank is reported to be extending seaward.

Four conspicuous radio masts stand close S of the river mouth.

Laufasgrunn, an extensive sandbank, lies on the E side of the fjord, 4.5 miles SSE of Grenivik. Caution is advised as it is reported to be extending farther S.

Gloesiboer, a small trading station, is situated 5.5 miles S of Hjalteyri. It is fronted by a pier, 82m long, with a depth of 4.6m alongside the outer end.

A conspicuous red and white pylon stands on the W shore, 1.5 miles SW of the station.

Svalbardseyri, a trading station, is situated on the E side of the fjord, 12.5 miles SSE of Grenivik. It stands on a low and flat spit that is fringed by a sandy beach. A light is shown from a tower, 8m high, standing on the end of the spit. A pier, with shallow depths alongside, projects from the S side of the spit. Good temporary anchorage can be taken, in depths of 10 to 20m, in the lee of the flat, about 185m offshore.

A hut with a flagstaff stands on the summit of a mountain, about 2.5 miles E of the station. It is reported to be prominent in clear weather. An aeronautical radiobeacon is reported to be situated about 0.5 mile N of the station.

Krossanes, a small trading station, is situated 3 miles SSE of Gloesiboer. A fish oil factory with a conspicuous chimney, stands at the station and is fronted by several small jetties with depths of 4m alongside.

A small boat harbor, protected by a breakwater, is situated close W of the mouth of the Glera River, 1 mile SE of Krossanes.

Akureyri (65°41'N., 18°05'W.) (World Port Index No. 00310), one of the principal ports on the N coast of Iceland, is situated at the head of the fjord. The trade activity is considerable despite disruptions caused by ice that can last for several months during the years there are large incursions of polar ice.

Berths and Limitations

Berth	No.	Length	Depth at LW	Remarks
Krossanes	1	50m	6.0m	Oil, fish-oil meat, cement.
Drattarbraut	3	—	—	Slipway.
Slippkantur	4	275m	6-7m	Ship repairs.
Togarabryggja-1	6	110m	6.5m	General cargo.
Togarabryggja-2	7	67m	6.5m	General cargo.
Londunarkantur-1	8	75m	6.0m	Fish landing.
Londunarkantur-2	9	65m	5.5m	Fish landing.
Esso-bryggja	10	—	—	Oil.
Tangabryggja	11	70m	8.0m	Cattle feed, general cargo.
Oddeyrarbyggja	12	140m	7.5m	General cargo, passengers.
Torfunefsbyggja	13	100m	5.5m	Passengers.
Austurbakki	—	170m	7.0m	Fish landing.

Tankers- At Oddeyri (KEA-bryggja) and Krossanes, there are oil berths with alongside depths of 5 to 6m.

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The port can be contacted between the hours of 0800-1200 and 1300-1700 by telephone to the harbormaster +354 9. 462 4391 or 462 3664; by VHF on channel 16 or 12.

Pilotage.—Pilotage is not compulsory but available by arrangement with the harbor master. Fjord pilot boards close S of Hrisey and harbor pilot boards NE of Oddeyri.

Anchorage.—The holding ground in the port, being composed of soft and slimy mud, is poor. Anchorage may be obtained, in depths of 27 to 33m, under the lee of the spit.

Tides—Currents.—Tides rise 1.3m at springs and 1m at neaps.

Oddeyri, a flat and sandy spit, projects from the W shore to within 0.5 mile of the E side of the fjord. Akureyri lies on and extends S of this spit. A light is shown from a framework tower, 12m high, standing on the SE extremity of this spit. Several prominent tanks stand in the vicinity of the SE end of the spit. A conspicuous cathedral, with twin towers, stands 0.5 mile SW of the light tower. A prominent school, with a red roof, stands close S of the cathedral. A roadway was reported (1986) to be constructed across the head of the fjord.

8.68 Geldinganes (66°09'N., 18°01'W.), a hilly point, is located 6.75 miles ESE of Gjogurta. The coast between is high, steep, and fringed with rocks. Thorgeirsfjordur and Hvalvatnsfjordur, two bays, indent the coast, 3.25 and 5.5 miles, respectively, E of Gjogurta. Both are mostly foul and should be avoided.

In 1991, it was reported that a waverider lighted buoy is moored about 7 miles NNE of Gjogurta.

Local Magnetic Anomaly.—Abnormal variation have been reported to exist in an area centered about 11 miles NNE of Gjogurta. A constant deflection of 16°E of the normal was observed within a radius of 8 miles of this position.

Grimsey (66°32'N., 18°00'W.), a grass-covered island 104m high, is located 23 miles N of Geldinganes. It rises steeply on the E side and forms a wall of rock about 90m high. The W side slopes more gradually and is mostly bounded by cliffs up to 15m high. A light is shown from a tower, 10m high, standing on the S extremity of the island. A radio beacon is situated close to the tower.

Flesjar, consisting of two drying rocks, lies 0.25 mile SSE of the light tower. A reef extends for a short distance S from it.

Eyjafotur, a steep-sided islet, lies close E of the N extremity of the island. A rocky reef, which dries, extends about 275m NW from it.

Sandvik, a settlement, stands along the SW coast of the island. Prominent marks include a small gray church, two large white buildings, and two radio masts. A shallow harbor for fishing vessels, protected by a breakwater, fronts the settlement. Anchorage can be taken, in a depth of 18m, off the settlement, about 0.5 mile WSW of the church..

Holl (66°50'N., 18°09'W.), with a least depth of 14.9m, lies about 16 miles NNW of the N extremity of Grimsey.

Kolbeinsey (Mevenklint) (67°09'N., 18°41'W.) is a rocky islet 7m high lying about 23 miles NW of Holl. It is about 70m long and about 30 to 60m wide. The islet is surrounded by submerged and above-water rocks, especially at the NW end, where they extend almost 0.4 mile WNW.

8.69 Skjalfandi, a large bay, is entered between Geldinganes and Tjornes, 21 miles ENE. It extends S for 12 miles and is entirely open to the N. The coasts of the bay are mountainous except for a large plain located at the head through which flow two large rivers. With the exception of a minor traffic to Husavik, this bay is seldom visited. It is mostly deep but polar ice penetrates to the head. Several rocks and reefs fringe the shores of the bay.

Caution.—Vessels should exercise caution when passing or entering Skjalfandi as a strong inward current has been experienced.

Tjornes (66°12'N., 17°09'W.), a somewhat salient point, is located near the middle of the N side of a hilly promontory. A light is shown from a tower, 13m high, standing on the extremity of the point. Breidhavig, a small open bay, is located close W of the point and encumbered with rocks. Burfell, a conspicuous flat-topped mountain 760m high, stands 9.5 miles S of Tjornes.

Flatey (66°10'N., 17°52'W.), a flat island 16m high, is located on the W side of the entrance to the bay, 3.25 miles E of Geldinganes. A light is shown from a framework tower, 8m high, standing in the middle of the E end of the island. A racon is situated in middle of the E end of the island. A small and shallow boat harbor is reported (1990) to be deserted.

Flateyjarsund, a channel with a least mid-fairway depth of 9.4m, separates the island from the mainland. Several rocks lie close off the mainland on the SW side of this channel and during N gales, seas break right across its NW entrance. In N winds, anchorage can be taken under the lee of the island. The best berths are in depths of 12 to 14m, good holding ground, about 0.5 mile from the S shore of the island. During N gales, the anchorage may still be approached by the SE entrance. The tidal current in the channel is W-going on the flood tide and E-going on the ebb.

Lundey, an islet 41m high, is located about 1.25 miles off the E shore of the bay, 8 miles SE of Tjornes. A drying reef extends about 0.5 mile N from the N side of the islet and a chain of submerged rocks lies between the S side of the islet and the mainland. A light is shown from a tower, 6m high, standing on this islet.

Lundeyjarbreki, a shoal with a least depth of 3.7m, lies about 1.25 miles NW of Lundey. It is marked by heavy breakers in stormy weather.

Husavikurhofdi (66°03'N., 17°22'W.), with a high hummock on it, on the SE side of Skjalfandi, is the N entrance point of Husavik.

Husavik (66°02'N., 17°20'W.) (World Port Index No. 00320), a trading station, is situated in a small cove entered 3.25 miles S of Lundey. The N entrance point of the cove, from which a light is shown, consists of a prominent hummock, 70m high. A small harbor, protected by breakwaters, is situated in the N part of the cove. There are three piers with depths of 6m alongside. Vessels of up to 4,000 grt have been accommodated.

Pilotage.—Pilotage is not compulsory but is available. The harbor may be contacted by VHF.

Anchorage.—Anchorage can be taken, in a depth of 9m, sand, about 185m S of the head of the W breakwater, but this position is exposed to WNW winds, which are dangerous. Care must also be taken to avoid a 4.5m shoal patch which lies about

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365m S of the harbor entrance. The approach to the roadstead is indicated by lighted range beacons.

8.70 Manareyjar (66°17'N., 17°07'W.), two islets, is located 4.5 miles NNE of Tjornes and surrounded by rocks. Haey, the S islet, is the smaller but higher of the two. It is 39m high and a conspicuous large hole, which is best seen from SE or NW, pierces it. A light is shown from a structure standing on a red house on this islet.

Lagey, located 0.75 mile NW of Haey, is 22m high and the larger of the two islets. A rock, with a depth less than 2m, lies about 0.75 mile NW of this islet. The channel between Manareyjar and the mainland is mostly free of dangers and frequently used.

Eyjabrekar, a group of dangerous rocks, lies on a shoal patch, about 2 miles N of Lagey. The channel between Manareyjar and Eyjabrekar should be avoided.

Isolated depths of 20m and 15.5m have been reported to lie about 5.5 miles N and 15 miles NW, respectively, of Eyjabrekar.

Local Magnetic Anomalies.—Abnormal variations exist in an area lying between Manareyjar and the mainland. In some places the magnetic compass appears to be quite dead and in others deflections up to 34° from the normal have been observed.

Deflections of 17°E and 5°E of the normal have been observed in positions located about 3 miles and 6 miles, respectively, N of Eyjabrekar. A deflection of 9°E of the normal was also observed in a position about 3 miles farther N.

8.71 Axarfjordur (66°13'N., 16°45'W.), a wide bay open to the N, is entered between Tjornes and Raudhinupur, 23.5 miles NE. An extensive plain, through which several rivers discharge, is located at the head of the bay. Axarfjordur is subject to incursions of polar ice and is mostly only used by fishing vessels bound for Kopasker.

Local Magnetic Anomalies.—Abnormal variations, up to 18°W of the normal, have been observed to the NW of Raudinupur. Over a small area, centered about 1 mile N of the headland, a deflection of 11°W of the normal was also observed.

Caution.—Vessels should exercise caution when entering or passing Axarfjordur as a strong inward current has been experienced off the entrance.

Raudinupur, the NE entrance point, is a reddish-colored headland. It rises vertically from the sea to a height of 60m and is conspicuous as the surrounding land is low. A detached rock, which also rises to a height of 60m, stands close off the headland. A light is shown from a tower, 8m high, standing on the headland.

Caution.—Strong tidal rips, which are dangerous to small craft, sometimes extend for several miles N of Raudinupur.

Gefla, a prominent hill 209m high, stands on the E side of the bay, 5.5 miles S of Raudinupur.

Snartarstadhanupur, a detached hill 284m high, stands close to the E coast of the bay, 9.5 miles S of Raudinupur. It rises to a flat summit and is conspicuous.

Thverarhryrna, a prominent mountain 539m high, stands 4.5 miles inland, 12.75 miles S of Snartarstadhanupur. Its summit resembles a horn when viewed from certain directions. Sandfell, 524m high, and Hafrafell, 534m high, stand 2 miles

and 6 miles, respectively, S of Thverarhryrna; they are also both prominent.

Gaesafjoll, a conspicuous mountain 881m high, stands 21 miles S of the head of the bay.

Kopasker (66°17'N., 16°27'W.) (World Port Index No. 00330), a trading station, is situated on the E side of the bay, 12.5 miles S of Raudinupur. It stands on the N shore of a small cove which may be identified by a large farm building, with a white gable, standing in an extensive cultivated area, about 0.5 mile ESE of it. A light is shown from a tower, 14m high, standing at Grimshafnartangi, a point located 1 mile NW of the station. The approach channel is indicated by pairs of lighted range beacons.

A pier, 110m long, extends SSE from the shore and is protected by a breakwater. A berth, 70m long with a depth of 4m alongside, is situated at its outer end. A shoal extends S from the head of the breakwater.

Pilotage.—Pilotage is not compulsory but is available and recommended.

Anchorage.—Vessels can anchor, in depths of 6 to 7m, about 410m SSW of the head of the breakwater. However, a very heavy sea is raised by strong winds from between NW and SW. During summer, fishing vessels also anchor off the E shore of the bay.

8.72 Melrakkasletta (66°28'N., 16°15'W.) is an extensive projection that lies between Axarfjordur and Thistilfjordur. This projection consists, for the most part, of a large and low plain bounded on its E and W sides by mountains. The N side of the projection is low, much indented by small coves, and fronted by rocks.

Caution.—Vessels should give the N coast of Melrakkasletta a wide berth, especially when approaching it from the E as, in certain lights, the low land in the vicinity of Hraunhafnartangi, the NE extremity, does not show up against the higher background.

Haganes, a small point, is located 2.5 miles ENE of Raudinupur and a dangerous reef extends about 0.5 mile seaward from it.

Rifstangi, a salient point, is located 6 miles ENE of Haganes. It is the N extremity of Melrakkasletta and the N point of Iceland. A reef extends NNW for about 0.5 mile from this point. A disused framework light structure is reported to stand near the extremity of the point, but it is often obscured by dust clouds. Sigurdharstadhavik, a wide bay with marshes at the head, lies between Rifstangi and Haganes.

Hraunnnhafnartangi (66°32'N., 16°02'W.), a salient point, is located 4 miles E of Rifstangi. A light is shown from a tower, 19m high, standing on the point.

Asmundarrstadhavik, a cove fronted by several islets, is located 2.25 miles SE of Hraunnnhafnartangi. It affords anchorage to small vessels with local knowledge.

Gegnisevik, a small cove, is located 2 miles SSE of Asmundarrstadhavik. The coast between is fronted by Asmundastadhaeyjar, a group of dangerous rocks, which extends up to 1 mile offshore and is marked by a racon.

Raufarhofn (66°27'N., 15°56'W.) (World Port Index No. 00340), a trading station and fish factory, is situated on the shores of a small cove located close S of Gegnisevik.

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Tides—Currents.—Tides rise about 1.4m at springs and 1m at neaps.

Depths—Limitations.—A small craft basin, protected by a breakwater, is situated in the inner part of the harbor.

Hafnarbryggja Quay is 90m long with depths of 5.5 to 6.6m alongside. Togarakantur Quay is 50m long with a depth of 6.7m alongside. There is also 130m of berthing space with a depth of 4m alongside. Vessels of up to 120m in length and 6.5m draft have been accommodated.

Aspect.—A promontory, 34m high, extends 550m S and protects the harbor on its E side. A light is shown from a tower, 10m high, standing near the end of this promontory. A radiobeacon transmits from a position about 0.5 mile W of the light.

Holminn, an islet, lies close off the SW extremity of the promontory. A reef extends 185m SSE from this islet and provides further protection to the harbor. Baka, a shoal with a least depth of 1.5m, lies at the S extremity of the reef and is marked by a lighted buoy.

A dredged entrance channel leads to the quays and is indicated by lighted range beacons.

Pilotage.—Pilotage is not compulsory but is available and recommended. The harbor may be contacted by VHF.

Anchorage.—Anchorage can be taken, in a depth of 10m, sand and shells, in the roadstead outside the harbor, slightly S of the entrance range.

Caution.—With onshore gales the sea breaks right across the narrow entrance of the cove.

The entrance channel is liable to shoal.

Vessels are advised not to enter the harbor without local knowledge.

8.73 Melrakkanes (66°24'N., 15°43'W.) is located 6.5 miles ESE of Raufarhofn and a rocky spit extends up to 0.5 mile NE from it. A light is shown from a tower, 12m high, standing on this point.

The coast between Raufarhofn Melrakkanes is indented by four coves which are mostly foul. However, fishing vessels, with local knowledge, occasionally take temporary anchorage in some of them.

Faxasker, a shoal patch with a depth of less than 2m, lies 0.75 mile offshore, about 1.5 miles SE of Raufarhofn Light.

Thistilfjörður (66°20'N., 15°30'W.), a wide bay open to the N, indents the coast for 14 miles between the E side of Melrakkasletta and the NW side of the Langanes Peninsula. It is entered between Melrakkanes and Svinalaekjartangi (Karl) 21 miles E. Thorshofn, the only trading station in the bay, is situated on the E side near the head. A wide plain, traversed by numerous rivers, backs the head of the bay. A mountain range rises at the W side of this plain and extends N to Melrakkanes.

Caution.—Vessels should exercise caution when passing or entering Thistilfjörður as a very strong inset has been experienced off it.

Thistilfjörður is frequently entirely filled with ice.

Vidarfjall, a prominent peak 410m high, stands 8 miles S of Melrakkanes. Ottarshnjukurand, another prominent peak 456m high, stands 4 miles SW of Vidarfjall.

Svalbardhnupur, a conspicuous peak 703m high, stands 12.5 miles SSW of Vidarfjall.

Raudhanes, a small promontory, is located on the W side of the bay, 8 miles S of Melrakkanes. It may be identified by two fairly high rocks, which lie close off it, and by an arch near its extremity. Kollavik, a small bay lying close N of this promontory, should not be entered without local knowledge.

Grenjanes, a point on the E side of the bay, is located 15 miles SW of Svinalaekjartangi (Karl). The coast between is fronted by foul ground and, in places, shoals and rocks extend up to 2 miles offshore. A shoal spit extends up to 1.75 miles NW of Grenjanes and a light is shown from a prominent tower, 20m high, standing on the point. It is reported that a stranded wreck lies close NW of the point.

Heidarhofn, a cove fronted by foul ground, is located about 3 miles ENE of Grenjanes. It is formed by a spit on the N side and a small projection on the S side, and affords anchorage to small craft with local knowledge.

Thorshofn (66°12'N., 15°20'W.) (World Port Index No. 00350), a trading station, is situated 3.5 miles S of Grenjanes. It stands on the shores of a cove at the E side of Lonafjörður, a small bay occupying the head of Thistilfjörður.

On the W side of the harbor, the remains of the outer breakwater, which collapsed in 1984, extend 220m SSW and should not be approached within 50m. A spur of this breakwater projects 60m SSE then 60m NE. A jetty, which forms the E side of the harbor, extends 70m S. There are depths of 3.3 to 5m within the harbor with berths for fishing vessels. The approach is indicated by lighted range beacons.

Anchorage.—In the fine weather season, the cove may be considered a good anchorage, but the swell is at times heavy. Coastal vessels can anchor, in a depth of 10m, sand, very good holding ground, off the cove.

8.74 Fontur (Langanes) (66°23'N., 14°32'W.), the NE extremity of the Langanes Peninsula, is located 7.5 miles E of Svinalaekjartangi (Karl). The coast between forms a bight within which temporary anchorage can be taken, in depths of 10 to 20m, near the head. This anchorage is frequently used by fishing vessels with local knowledge.

Langanes Light is shown from a round tower, 10m high, standing on Fontur.

Local Magnetic Anomaly.—A local magnetic anomaly has been observed in a position close E of Langanes Light.

Caution.—With good visibility, the rounding of the Langanes Peninsula presents no difficulties, but with low visibility every precaution must be taken as this area has a deservedly bad reputation. Frequent thick fogs, strong tidal currents, and the unreliability of the magnetic compass have caused the loss of many vessels. Additional dangers and difficulties may be encountered due to the presence of polar ice or Langanesrost, an area of heavy overfalls, which may extend far out to sea even in calm weather.

In conditions of low visibility, vessels approaching from the W should endeavor to make a landfall at Svinalaekjartangi (Karl) or keep in depths of over 90m. If Langanes light tower is observed, during a temporary clearing of the fog, vessels should steer a course to pass well clear of it as there is usually a very strong set into Thistilfjörður.

Vessels approaching from the S or E in low visibility should keep in depths of over 90m and make allowance for the tidal currents that will usually set to the S.